

T Okanda
SR - Edinburg
Chazy { Lincolnshire
New Market

Locklick
Herstland

p. 2

Oct. 18, 1951
Tumbling Brook Section, Va.

New Market - Massive lithographic
gray ls. Tetradium - now
siliceous.

Lincolnshire - Thin bedded black ls.

10-1

weathers gray, carries
silicified fauna, contains
black nodules

10-1 near base, 30' ± above
contact

Photo 1 - close up
" 2 New Market at base,
coll. of bean bag (photo 1) } $\frac{1}{25}$
F5

Photo 3 close up white marking
f 11 - $\frac{1}{50}$

10-2

50' ± above base 6" bed
? Sowerby's zone? may be
below the zone
directly above photo 3

photo 4 - Hammer on metabentonite?
bed near top of Lincolnshire.
cobbley ls above Edinburg
or close to it. f 11 50. 17' ±

10-3 Metabentonite? bed 1 photo
4, approx 1' thick

Discarded, etc. shows nothing.

~~10-4 Shale parting in Edinburg~~

10-5 ls above sh.

↑ about middle of Edinburg
right above house (brick)
± below Telephone line
crossing rd.

10-6 Orands
2.1' US Hway 11 - 0.4 mile
W. of Tumbling Run, N side
to rd.

10-7 same S side to rd.
(photo 5) at 10-7
looking E.

Collins
NAME Loeblich

December 3, 1951
DATE

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

Miss G. Collins, Md. Geol. Survey took party to Paleocene localities in Prince Georges Co., Md.

Loc.1 -First Paleocene loc. found in Md.

Lanham quad., about 1 mile W., SW., of Brightseat Take Sherrif Rd. west of Brightseat, cross calvert and turn S. on first private Rd. At house turn W. past 2 barns. Creek that starts as spring N. of fence and W of last barn. About 10' exposed in creek, base not exp.

12-3-1 Shell bed, 9'-10' below top of fm.

12-3-2 Approx. middle of formation, some shells

12-3-3 Top of Paleocene, overlain by leached brown ~~material~~ material containing phosphatic nodules.

The formation is sandy near base, more claye near top.

Loc. 2 - Creek to E of same barn as loc.1, this creek curves around houses and crosses Sherrif Rd. at calvert.

10-3-4 Near top of Paleocene, shell bed.

10-3-5 Down stream, Cretaceous clay, fossils better preserved, more pearly, overlain by sandy Paleocene (12-3-6)

12-3-6 Paleocene, less than 1 foot above Cretaceous.

Loeblich
NAME Hessland

DATE Oct. 18, 1951

Tumbling Brook section, Virginia

Newmarket - Massive, lithographic gray ls.
non siliceous

Lincolnshire - Thin bedded black ls., contains
black nodules, weathers gray, silicified
fossils

- 10-1 Near base, about 30' above contact.
- 10-2 About 50' above base, 6" bed, ?Sowerbyites zone.
- 10-3 Metabentonite - Discarded, no fossils
- 10-4 Shale parting in Edinburg. Discarded
- 10-5 Ls. above shale, about middle of Edinburg,
right above brick house and below telephone line
crossin road.
- 10-6 Oranda, US Hway 11, 0.4 miles W. of Tumbling Run,
N. side of road.
- 10-7 Same as above, S. side of road. * Tower

Strausburg Junction

- 10-8 Lower portion of Edinburg
- 10-9 About 10' below 10-8 □ * Tel. pole
- 10-10 " 10' below 10-9 house . 10-11
- 10-11 " 20' below 10-10, on line with telephone pole
- 10-12 40'-60' above 10-8, near Middle of Edinburg

Stromsburg Junction

Edinburg.

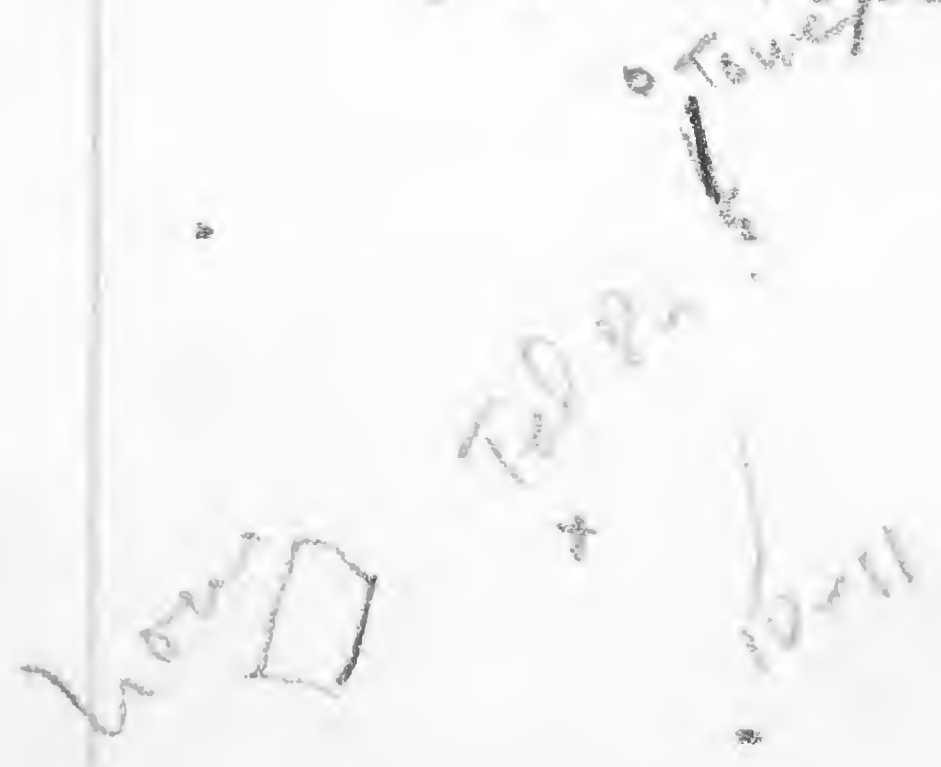
10-8 ~~Middle~~ Lower position
 photo-6 outcrop 7 10-8
 in field. F 11 50 - 6'
 photo. 7 view of same

10-9 same as 8, 10' ± below 8

10-10 10' ± below 10-9

10-11 20' ± below 10-10

on line with Tel. Pole



10-12 ^{start above} ~~below~~ 7-40'-60' 10-8

near middle of ~~line~~
Edinburgh. slightly
below site of Tree.

Cooke
Shepherd
Hessland

Oct 22, 1951

Piscataway Cr. Locality, near
rd. 7 mi. \pm from District line.

Indian Head Rd. N of Piscataway
Cr. Prince Georges Co. Md.
N. J. bridge rd. cut

Ogema - 4' \pm above contact (Marlboro clay)
Nanjemog

10-21-3

10-21-2

10-21-1

Ogema shells

lower shells
Turritella mortoni

Nanjemog - yellowish clay
iron concretions at this local
(Lower member of Nanjemog)
well met.

(Photo 23 by Hessland
of outcrop)

Summits Loc. (F?)

10-22-51

Corke
Stephenson
Hendland

Fort Washington

10-22-4 Mammouth - 4' above
base contact of Patuxco
face bored by bee holes
no fossils
11/8/52

basal cgl of Mamm
 1 1/2' cgl.
 2' more to
 coll - (10-22-4)

10-22-51

Cope
sepiosaurus
Horseshoe

Upper Marlboro

Mar. 202 to car yard

10-22-5

2" below Marlborough

Agua

10-27-6

2" above contact
Marlboro clay

Addison Rd

.65 mi S of Central Ave.

10-22-7

Paleocene, 0.65 m. S. of
Central Ave on Addison Rd.
below contact with Agua.

10-27-8

Agua, bed, just above
Paleocene, Addison Rd

12-3-51

p. 1

Miss G. Collins, Md. G. S.
Took party To Paleocene localities
in Prince Georges Co. Md.

Loc. 1. (First loc. of Paleocene
ever found in Md.)

Lanham □ about 1 mile W, SW
of Brightseat, Take Sherrif rd W.
of Brightseat cross culvert and
turn S on first private rd. at
house turn W past 2 barns.
Cr. W. of last barn that starts
as spring N of fence

about 10' Paleocene exposed
in Cr. base not exp.

12-3-1 Shell bed 9'-10' below Top of
fm.

12-3-2 approx middle of fm., some
shells.

12-3-3 Top of Paleocene, near B.M. stake.
Overlain by leached brown
material containing phosphate
nodules.

The formation is more clayey
near top, sandier near base.

12-3-51

p. 2

loc. 2

Creek to E of same farm as loc. 1
Cr. curves around houses and
crosses Shertof rd at culvert.

12-3-4 Near top of Paleocene, shell bed

12-3-5 Down stream. Cretaceous
clay, fossils better preserved,
Ammonite, overlain by sandy
base of Paleocene (12-3-6)

12-3-6 Paleocene less than foot above
Cretaceous

Loc. 3

Addison Rd. 0.6 mi. E of Centerville

12-3-7 Cret. crops out in Cr. W of House
across rd from cut.

12-3-8 Walk Cr. upstream past pig pens
to exposure. Paleocene 3' ± below
Top

12-3-9 Agave just above contact of 12-3-8.
No ostr.
Disc. 2/66

See 1/26/53

NAME

DATE

1/26/53

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Paleocene Lohanian ☐

1/26/53-1

Loc. 1 lower outc.
Approx same as 12-3-1, 1951

1/26/53-2

Loc. 1 upper outc.
approx same as 12-3-2, 1951

Loc. 2

second Cr. same as 12-3-51, p. 2.

1/26/53

2 bags.

Cretaceous below contact
2-5' \pm below Exogyra.
and associated with
well preserved nautilus
shells.Walked up stream to
head saw exogyra and
nautilus shells -
no Paleocene ??

May 8, 1952

Dr W.C.

Film 1 B+W. Knight #38 "Werner on Top
 yellow
12850 52-5-8-1 - 1" x 1/2" shale parting
 actw. 2 Lss. beds.

Ostacodites

See map with (X)

May 9, 1952, p. 1

Keeper Cr. Loc. 100 yd from
upper sec of Fern Glen.Fern GlenBushbergsandy white or
oolitic ss.

4'

Glen PK.

sh.

(59.3)

→

(5-9-1)

16" shale

unknown ge. *Ammodiscus*?

Kimswick

collected

River

massive to

at red house
drop Town to Riv

See

Manchester ☐

RR Tracks stop car at gate

Chart.

Adrian Greenleaf 5-9-5-

Ferry Co. Cal.
St. Louis

28
Type 6a

Adams

5-9-3

"Fawn Glen Ls" in Mo.

5-9-71

Red, green or grey

593

red shale at level of
power line Ost.

5-9-41

15. at level $\frac{1}{2}$ between
Tracks & ditch

5-5-5

buff colored above red

(5-9-6) 3' above (5-9-5)

7
Dec chesty bed
material around
chest.

✓

100

red

buff

+

5-9-6
5-9-6

BOOK LINGOIN

Handwritten notes on a lined page, including the word "K" at the top and various scribbles and letters like "w", "o", "s", "c", "d", "e", "f", "g", "h", "i", "j", "k", "l", "m", "n", "o", "p", "q", "r", "s", "t", "u", "v", "w", "x", "y", "z" scattered across the page.

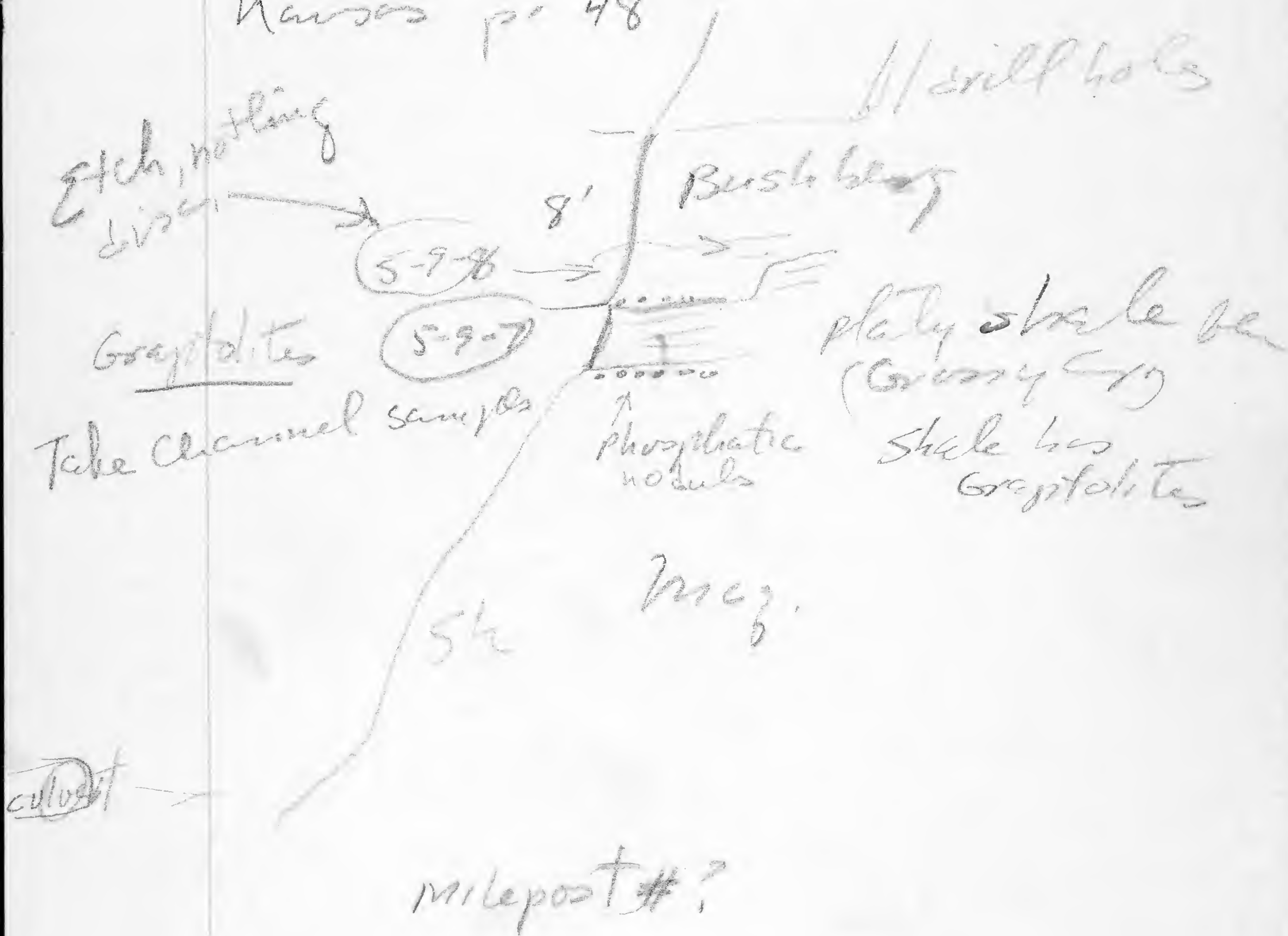
Zone with
state

1890

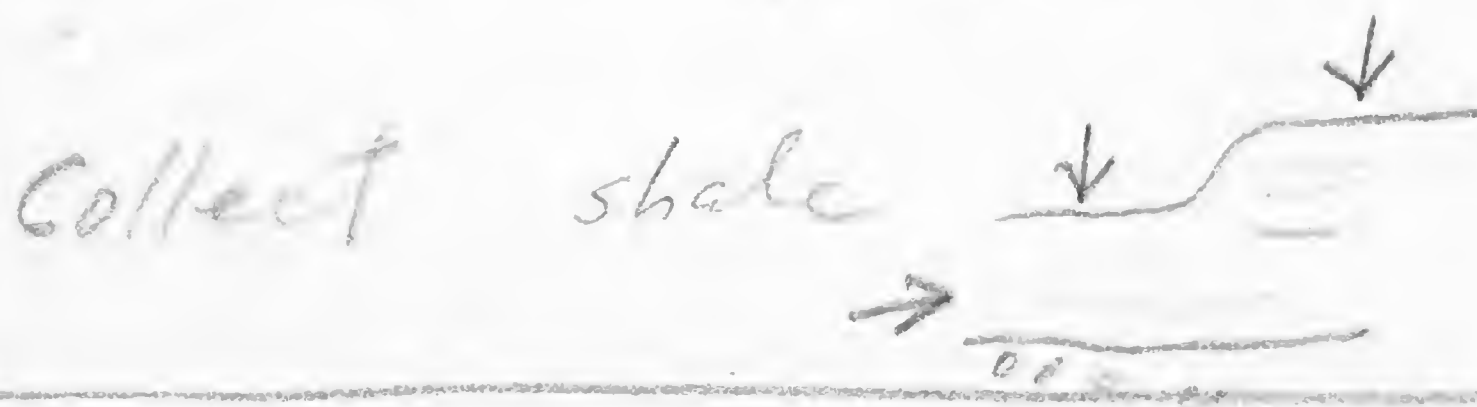
Section of Cattle wood.

Castlewood
~~Castleford~~ section
 Kansas p. 48

May 9 p. 3



5-9-7 middle of Grossy Cr. sh. which contains grapholites



19

May 10, 1952

P.1

See Fauna of the Glass Park Ls.: St. Louis
Acad. Sci. Trans. vol. 16 no. 7 pp. 431-471, 1906.



Quarry on hill at 2nd bench
of Tunnels, N. end of Quarry.

Goltz Quarry

5-10-4 slab near tunnel Glass Park
Just above sandy zone at
base

1st set of tunnels has
ostracodes in Kimms.

May 11, 1952

P. 1.

(5-11-1)

S. wall

RR cut due S of Annex
 "B" of the Arena. E end of
 cut. Prob. Knight's Loc.
 37. slump? clay with ls.
 Prob. L. Ft. Scott.



NAME Cooke, Stephenson
Hessland

DATE Oct. 22, 1951

Piscataway Creek locality
Indian Head Rd., about 7 miles from District line
Schmidt's loc. F?

10-21-3 about 4' above contact

(Marlboro Clay)
Nonjemoy

10-21-2

shells (Aquia)

10-21-1

bed with
Turritella maritima

Nonjemoy - yellowish clay with iron concretions
the size of walnuts. Lower member of Nonjemoy

10-21-4 Fort Washington, Monmouth- DISCARDED

Upper Marlboro
Md. 202 to car yard

10-21-5 Aquia, 2" below Marlboro

10-21-6 Marlboro clay, 2" above contact.

Addison Road

0.65 miles S. of Central Ave.

10-22-7 Paleocene below Aquia

10-22-8 Aquia, base, just above contact

Form 9-076

NAME

DATE

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

Jan. 26, 1953

1-26-1 Loc. 1 of Paleocene, approx. same as 12-3-1-1951

1-26-2 Approx. same as 12-3-2-1951

1-26-3 Loc. 2. Second creek,
Cretaceous below contact, 2' to 5' below Exogyra
associated with well preserved nacreous shells.

Walked upstream to head, saw Exogyra and
nacreous shells - NO PALEOCENE?

Form 9-076

W.C. Werner

NAME

DATE

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

May 8, 1952

5-8-1

J.B. Knight's loc. 38, 1" to $\frac{1}{2}$ " yellow shale
parting between 2 limestone beds.
see map with x

12850

Form 9—076

Williams

NAME Duncan, Helen

DATE May 9, 1952

U. S. GOVERNMENT PRINTING OFFICE 16—37601-1

Keefer Cr. locality, 100 yds from type sec.
of Fern Glen

Fern Glen

Bushberg

5-9-2 2

Shale, 4' - Glen Park

/5+9+3/

5-9-1

16" shale, unknown age

Kimmswick ls. (M. Ord)

River

Park at red house and drop down to river

see Manchester quad.

Form 9-076

NAME

DATE May 9, 1952, p.2

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

Type locality of Fern Glen Ls. Missouri

5-9-3

Red shale at level of power line

5-9-4

Ls. at level $\frac{1}{2}$ between tracks and ditch

5-9-5

Buff colored above red

5-9-6

Cherty bed , material around chert -DISCARDED

26

Form 9-076

NAME

DATE May 9, 1952, p.3

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

Catlewood Section
See Guidebook, Kansas G.S., p.48

5-9-7 Middle of Grassy Creek shale, contains
Graptolites

5-9-8 Bushberg above 5-9-7 Etched and DISCARDED

Sohn

Oct 1951 - Mar 1954

118

3/21/06

119

3/28/06

120

4/4/06

NAME

DATE May 10, 1952

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

See Fauna of the Glen Park limestone: St. Louis
 Acad. Sci. Trans., vol. 16, no. 7, p. 435-471, 1906.
 Goetz Quarry

5-10-3

Bushberg

Bushb.

5-10-2

Glen Park

Glen PK

5-10-1

Shale

Shale

5-10-4

Slab near tunnel from Glen Park just above
 sandy zone near base

Quarry on hill at 2nd bench group of tunnels,
 at north end of quarry.

NAME

DATE

May 11, 1952

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

5-11-1

S. wall of RR cut due south of Annex "B"
of the Arena. E end of cut. Probably Knight's
loc. 37. Slump clay with limestone.
Probably Lower Ft. Scott fm.



5-11-2

35' E of centerline of Driveway, N. slope,
shale about 4 ft. above curbing & 5' N. of N
curb. Shale above massive ls. 2' to 3' thick, and
below thin ls. Prob. L. Ft. Scott, Brill later
said this is above Knight's loc.

Macklind

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May 11, 1952

p. 2

5-11-2

13000

35' E & of Driveway, N. slope
sh. 4' ± above Curbing & 5' N. of
N. curb sh. above massive ls.
2-3' thick and below series
ls. Prob. L. Ft. Scott.

Loc.

Macklin Ave. & Wise Ave.
465' W of Macklin Ave on new
street which is western
extension of Wise Ave.
new slope S of Barena Golf Tee.
across area of a new bldg.

According to Brill
this is above Knight's

Cyclotherm coal below this
is above ~~Scott's~~ Knight's Ft. Scott.

May 14, 1952

p. 3

(5-11-3)

12851

Hwy 21 & Meramec Riv.
 J.P. loc. 2 Bryer
 shale parting about
 1 ft below top of Upper
Rhynchonella zone, and
 about 4' above Bryer's
 locality

↑
 Probably Bryer's
 locality 5-11-3
 call. Topotype

See J.P. paper for section

May 1 & P. 1



May 12

p. 1

1939?

KGS Stop 24 pp. 52-53

1941

Geol. 15

Roadside outcrop

St. Louis Ls.

Phot 495 of Loc. (S-12-2)

(S-12-1)

Green clay in pockets of brecciated zone

S-12-2

1/2" - 1" seam of brown and greenish
 clay at rt side of exposure
 and slab just below clay. 30' left of
 1st Tel. pole on outcrop.

S-12-3

Greenish sandy zone 2' below (S-12-1)
 in brecciated zone

May 12

P. 2

Bob Cr. sec.
shale under Chontea
below a slump rock

5-12-5

5/12/4a

Chontea LS (prob. near
base) slump block
with shale

5-12-4

Callaway (Dev.) 1' ± above
base. (at Bob Cr.?)

W/O
05/12/4a

Hannibal

30' Louisa - fossils

2' Sarsifong

3-4" Gray Gt

7" Gray clay shale

2" sand, shaly

24'

Sil Bowling Gr

6' corral

40' sh.

Magnolia

old.

May 12

P. 3

Gen. & Gk. sp. 6162

Right past the Duval cabins.
Pinnacle HillOutcrop above
boat house. (cave.)

Collect Saverton

of La. Ls.

(5-12-5) parting in Ls Ls. near cave
with large brachiopod. 3'-4' above
base of La. Ls. ↑ *Syringothyris*

Go to rt of cave for

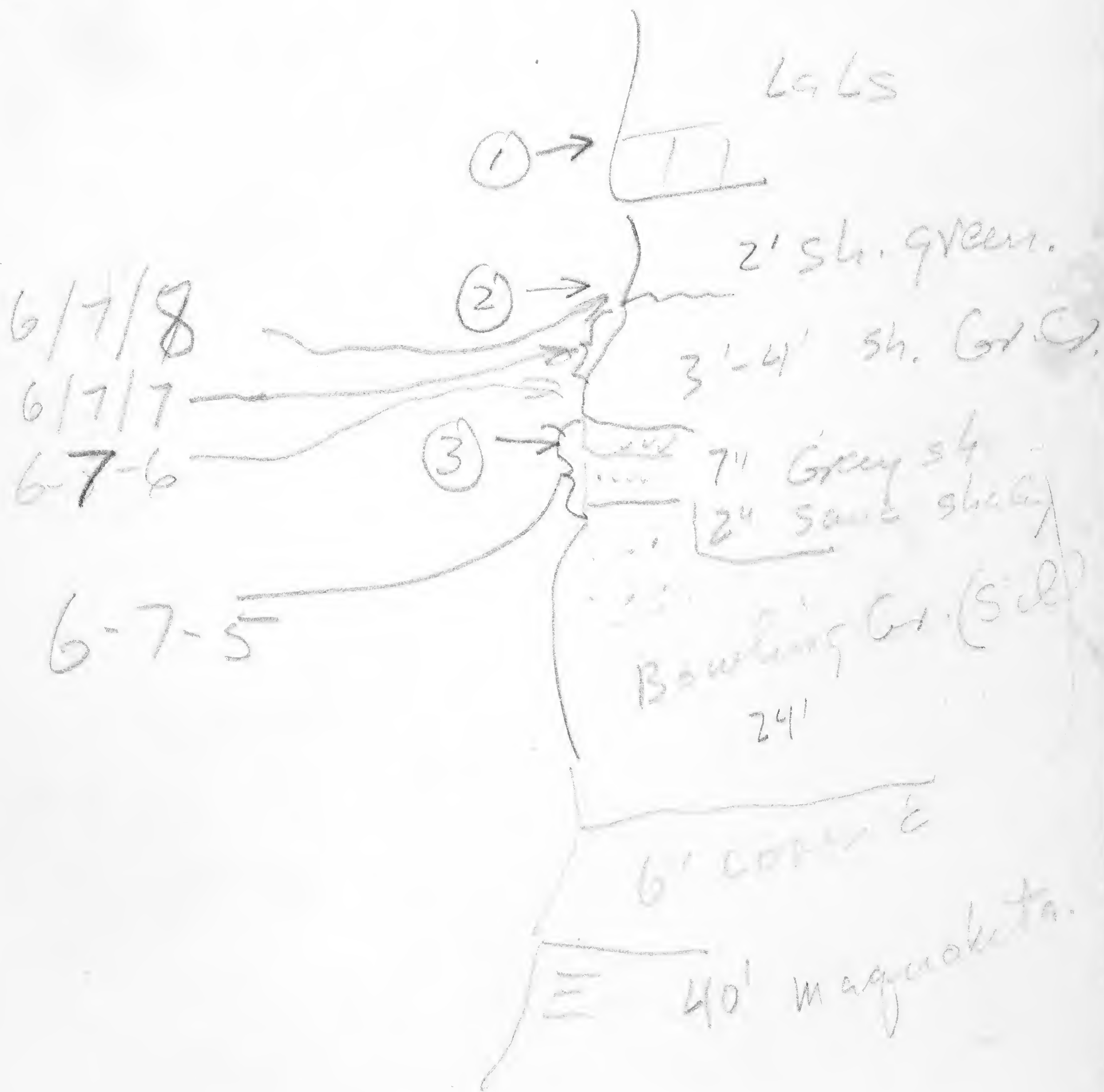
bed of Saverton, Grassy Cr. and
sh. & sand. Sand may be top of Bowling Cr.Saverton really a mudstone;
Grassy Cr. is a black fissile
shale.La. Ls. lowest bed has fossils in
partings right above and below.Dolomitized portion is yellowish,
carries calcite.

Get picture of La Ls in morning

(over)

Cooper found Ostracodes

- ① La. ls. just above base
- ② Sh. near base of Saverton
- ③ Sh. at base of Gr. Cr.



May 12

p. 4

Buffalo Hill (Mount Buffalo Cr.
 (slide) Gumbo Brook p. 062

Shale above lower ls. bed
 parting

Stop near gate walk old
 road to slide

Type Loc. 7 ls.

5-12-6

shale parting $1\frac{1}{2}'$ above
 base of ls. ls.



5-12-7

Sh. below
 ls. ls.

Note walk along rd. to place where cars are
 moved off rd. climb up to basal ls with
 Greeny Cr. and Sarsaparilla make channel
 and collect

12 1/2
5
870

May 13

P2

Town Branch Loc. 7 La 45
+ Saveria

Go N. on 7th To Griffiths
W on Griffiths To brick pen.
on 7th Cr. $\frac{1}{2}$ blocks

Note Collect

Saveria 100 ft and La.

OK.
June 6

Clinton Spring
Look for ss. at base of Gussier.
Nays white out Guss.
Theod & Gussier.
Basal Cr. Cr. exp to rt. of yellow
block.

La.
Saveria < Ostr. 1' below LaLS
Gussier < basal ss.
Boulding Green
Nays white

return Trip

93.1

Outcrop 93.4

93.82

Cross Cr.

53

May 13

p. 1

Kodomo 12¹³ Rowley's grave
H.O. left 5.6 + 8

Grassy Creek Type locality
Cliff opposite Arch Hufford
Place (see Genl of Pike Co.)

Cliff 40' + of shale overlain
by slumped Louisianian ls.
(See Bowling Green T for
road)

No Dist.
S-13-2

S-13-1

La. Ls slumped
2-4' clay
red br.
ss. rd. 6" base
5' cover

(S-13-3)
Grassy Cr.?
Kodomo 13, 14, 15 (10, 3.5)
16 25, 3.5
17

Gray sh. black
green bedding
surface

Dist.
S-13-4

LS? & sh. below 2/3 down slope
1 corodant to Huddle 8/14/70

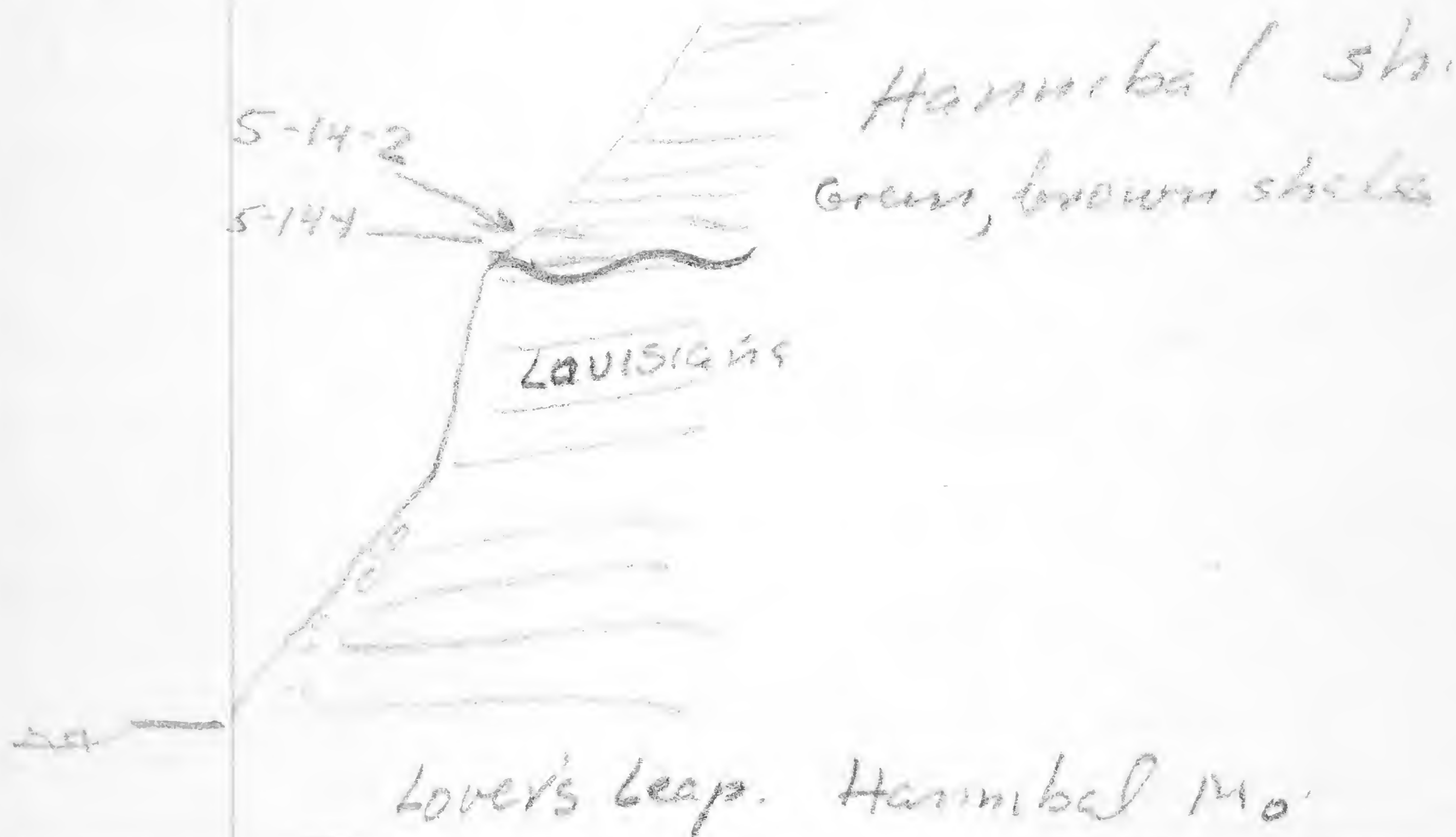
May 14
Hannibal Mo. Lover's Leap

5/14/1

Hannibal sh. 1'± above
Louisiana ss. brownish

5/14/2

Greenish sh. just above
(5-14-1)



Go up Fulton & Cypress or T to
last house. Vermicular ss. of Hannibal
make coll.

above which is basal Burlington full of
Crinoids called "brown zone" some
places it is called "Sedalia" depending
on fauna - no Burlington crinoids & Sedalia

May 14

p. 2

Top of Lover's Leap has top
of Burlington which is white
ss. with brown layers
and chert blebs. "There is
no appreciable shale in Burlington
overlying Keokuk but shale
which is greenish in color and
also more constant chert."

5-14-3
-3

Lover's Leap. Top.

Burlington to L of parking
area in cliff. rotten zone
 $3\frac{1}{2}' \pm$ above brown layer
cherty layers common on
face.

Kodak 1/50 f8 Top Lover's Leap
Shows br ^{ss} bed, chert, etc &
Top Burlington.

May 14, 1952

P. 3

Birch St.

~~East~~ ^{Corroco Station} ^{Hannibal Lock}
 House on hill, had quarry
 behind house. LA, and Hannibal
 exposed. Saw Bentonite with
 chert no power from floor at
 Turner.
 RR bridge across Illinois River
 in La. ls., ~~Bentonite~~ Hannibal
 on top.

LA is up near
 hill.

Lower's Leap rd.

Fulton St. ~~9 1/2~~ 2 3/10 miles
 along River where AA leaves
 Fulton St. Rd. to Saverston
 base of LOUISIANA and
 Saverston exposed. yellow
 sand below LA exposed.

Sample LA & Saverston

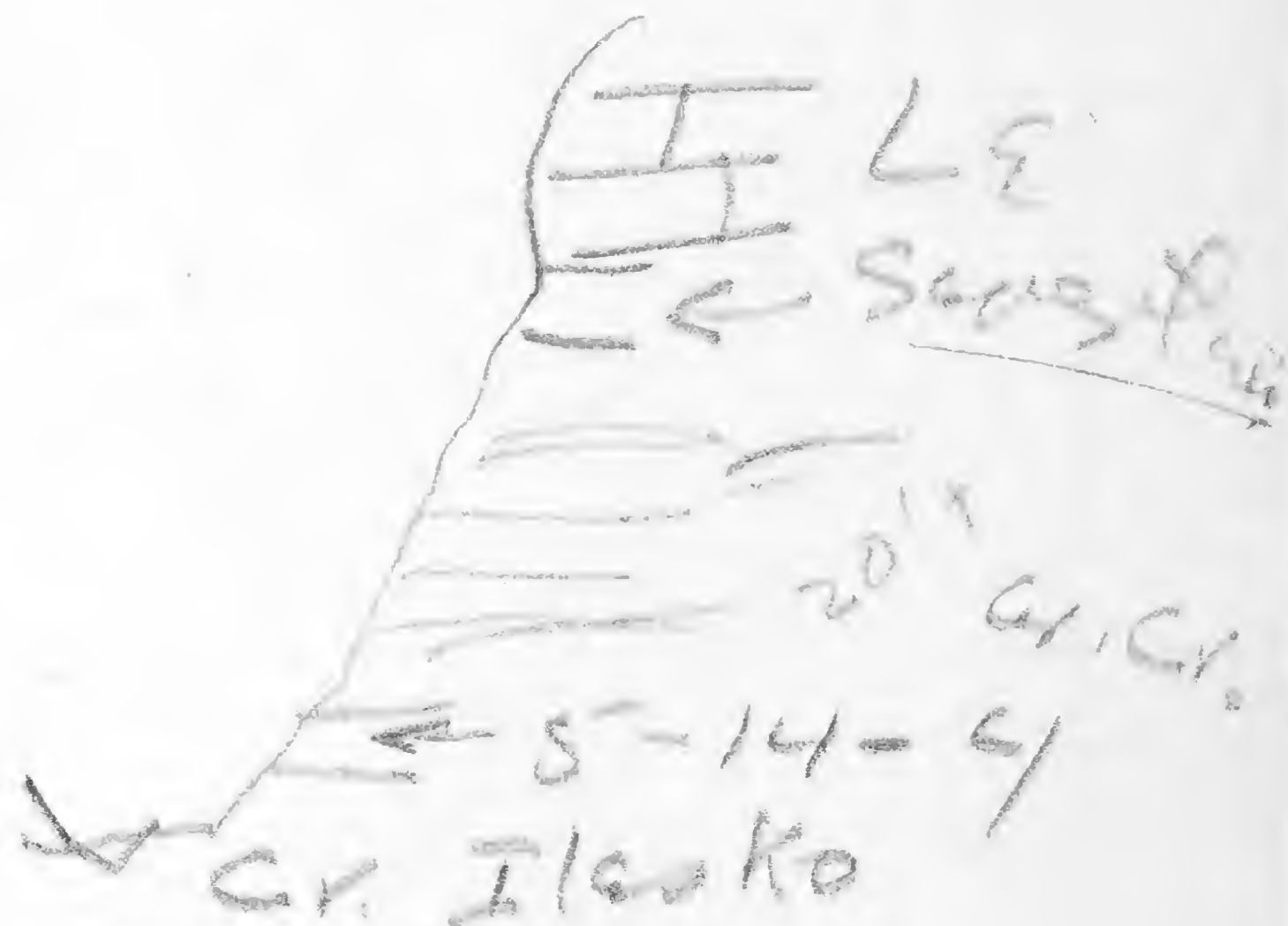
Keep along road 3 miles to Exposure
Try for fossils will get fossils

Days "60, 70" shall now Saverston

Saverston Station. Buried and marked.
 Type loc. continuing to School Turn rd. to
 Bridge where creek crosses railroad. Cr.
 Exposure shale well out above (Ord?), shale above

May 14, 1952 p.m.

Drive from school. 1.45 miles.



Shale 2'-3' above Cr.

May be Grassy Cr.

5-14-4

first house after Lowe mailbox
 opposite house
 see William p. 21.

"Hans found better exposure"
 keep on road.

1.75 mi. from sch. rd.
 meas. Swanton 4' 9" contact with
 Grassy Cr. exp.

Get samples ✓

May 15, 1952

p. 1

(Cromley and) and below the Burlington
 above Wash.

Kinderhook Type: 0.8 mi N
 Fork. Quarry, Guide Book p. 72-73
 Stop 37

25' Burlington
 10' McCrany
 30' English Riv. - brown sandy
 40' Maple Hill
 above spring

E.R. & McCrany
 No obs.
 5-15-1
 3 in whorl
 2 in Moore

The English River is light gray and
 buff. It is a sandy
 siltstone, & erodes into small
 weathered into smooth rounded surfaces
 above Engl Riv. McCrany which
 looks like La ls. but above McCrany
 is Burlington.

A. Engl Riv = Hannibal
 McCrany = new is below Burlington

B. Engl. Riv = Saratoga (which it
 does not look like)
 McCrany = La
 Hannibal Erosion
 Burlington on top

Note The Burlington-McCrany contact
 sharp, no basal ss. or profile

Keokuk is bluer than
Burlington

5-153

May 15, 1952

p. 2

Continued on rd. 5 min.
 bridge turn rt cross
 bridge go 0.5 mi. Stop
 creek has Seehorn Hollow

Burlington

Prospect Hill

8'±

McCraney

5-15-2

Burlington

massive yellowish

sandy mudstone

Stam Brook reports ostracodes (over)

Stop 42 pass 2nd bridge

out of VGSs. Cherty ls.

Hvok chert.

Gould Brook p. 76. saw bryozoan bed

Stop 43 Keokuk

Shale parting at base of

quarry below massive

blue bed called Upper Keokuk

Merrill A. Stainbrook, 1950
The fauna and correlation of
the McCraney Limestone of Iowa
and Illinois: Am J Sci vol
248 March 1950 pp 194-213.

Brandon, Iowa.

Sept. 1953 Stainbrook sent
slide with 2 crushed
round, smooth valves
Too high for Cavellina



May 15, 1952

p. 3

Type Warsaw

St W. 7 School in Warsaw

see Guide p. 77-78 (Stop 44)

Drive down ¹⁹⁴¹ bridge

Drive into field on left of

Bridge just before crossing.

Downstream from bridge

Solonchik with scoria 10' ±
upstream from bridge sh.geodes filled with quartz
Some have liquid inside.

✓ Collect from Warsaw

May 17, 1952

p. 1

3 Photos - Ledge 47' above
floor of Quarry (see p. 78)

Williams picture of me
hammer on sh. below (3 1/2')
sh. of 5-17-1

4 probable 8 1/2' sh.

5-17-1
No Ostr.

Shale 3" below 3 1/2'
bed of massive LS.

5-17-2
No Ostr.

Top 1"-1 1/2" of LS, just
below shale.

5-17-3

No
Ostr.

3 1/2' below 5-17-1
thin sh. around chert
nodule. Place where
Williams took my
picture. E. of 5-17-1



5-17-1

5-17-2

5-17-3

3 1/2'

14' 8"

floor of Quarry

May 17, 1952

see p. 79

0.4 mi. N of Quarry

5-17-4

shale 2-3' above

brown dolomitic ss.

penn

5-17-4

ST-LOUIS?

4' 6"

more exposed
in Cr. to W.

May 18, 1952 p. 1

Wells, 1900 Iowa G.S. vol 10, pp 57-79.

5-18-14 7 soft buff gritty ls. 3-5'

5-18-15 3 6 white oolite ls. 2-4

5-18-16 25 FG yellow ss, compact H.L. 6-7

41 FG. ls. McCreaney 12-18

5-18-10 3 Thin bands hard impure ls.
filled with Chonetes, associated with
thin oolite bedded 1/4 - 3/45-18-1 2 soft ss. Chonetes 255-18-2 } 1 soft blue sh. 60
5-18-3 }
5-18-4 }
-5 }
-6 }Kodak 1-4 Section of Burlington
at Burlington Iowa from
Fishing village, "Cascades"5-18-6
5-18-9

Cascade Section Prospect Hill Sec.
May 18, 1952 p. 2

- 5-18-1 1'-2' above base of
Chonoplectus ss. 0
- 5-18-2 6"-1' below base of Chonoplect
(assumed base.) 0
- 5-18-3 Brown layer 6" about
5 feet below Top.
- 5-18-4 Blue shale 2"-3" above 5-18-3
- 5-18-5 Sandy zone lower 1'± lower
than 5-18-4 has Chonoplectus. bed 2
-
- 5-18-6 brown and blue sh. 4' below
5-18-5
Ool. Corals
- 5-18-7 5' above base (assumed) of
Chonoplect. ss.
- 5-18-8 Shaly zone in Chonoplect ss.
6' above 5-18-7
Corals, Weller's
-
- 5-18-9 blue shale 3 $\frac{1}{2}$ ' below 5-18-8
Corals
- 5-18-10 Weller's bed 3. oolite below
McCroney
- 5-18-11 bed 3 chonates bed below oolite
- 5-18-12 basal bed of McCroney just above
oolite (5-18-11)
DISC

Cascade Sec Burlington

May 18, 1952

P3

5-18-13

ostr.

oolite, weller bed 6.

5-18-14

ostr.

weller bed 7 3' above
call 5-18-13.oolite grades into upper
bed, contact not visible

Left 7 Quays

5-18-15 oolite

1' - 1 1/2"

1 1/2'

sh. 5-18-16

5-18-17

Prospect Hill ss
ConcordiaChannel sample
upper 4' ±

ss. 5-18-17

J. H. McCrory

Burlington Iowa

Out Main to Concord or
next St. turn L. go down
dirt rd to Cascade. That is Prospect
Hill Section

May 19 1952

p. 1

Sec. at Snake pit, Knox Co. Mo.

Moore 1928 pp. 73-74

Osage

13 Burlington Ls. (Lower)

13 Ls. gray, coarse gr. crinoidal xltens, massive 8

12 Ls. lt gray to brownish, chert, stylolite 5 1/2

11 Ls. br. dol. coarse gr. crin. very massive 5 1/2

Sedalia

10 Ls. lt. br. f.g., massive, dol. pores, chert 1' apst 6 1/2

9 Ls. H. gr. & br. f.g. massive 2 chert bands 7

8 Ls. gr. to brownish coarse gr. xltens 3

7 Ls. hard, creamy to yellow, massive f.g. 2

Kinderhook

Chouteau

foss.

6 Ls. H. drab & yellowish br. thin alternating beds. a massive br. Ls. near middle 9-10

5 Ls. br. gr., med gr. partly xltens 3-4

4 Ls. bluish drab to br. med gr., argillaceous, scattered patches of xlt. Ls. in thin beds. Fossil. 5-63 Ls. wh. to H. gr., beds 2"-8" weathers in shelly frags. very foss 14

2 Ls. yellowish br. arenaceous, thin bedded. 2

Hannibal?

1 Sh. exposed in Riv. bl. to H. green. 1'

Snake ~~pt. 5~~ ^{May 19, 1952} put

p 2

#15

1/25 f 5.6

Picture of upper pt 3 section

Summary

"

"

Quarry Face Left side

Brown fossil. zone

5/19/2



bed 6 of mine

2' fossils

6'

alternating beds

Lithogr. ls.

Calcite nodules

Shale 5/19/1

5-19-2

Disc

Rotten zone in 1' lt. colored sand ls. above Lithogr. ls.

5-19-1

Shale below 6' bed of Lithogr. ls.

5-19-3

bed 6 of mine

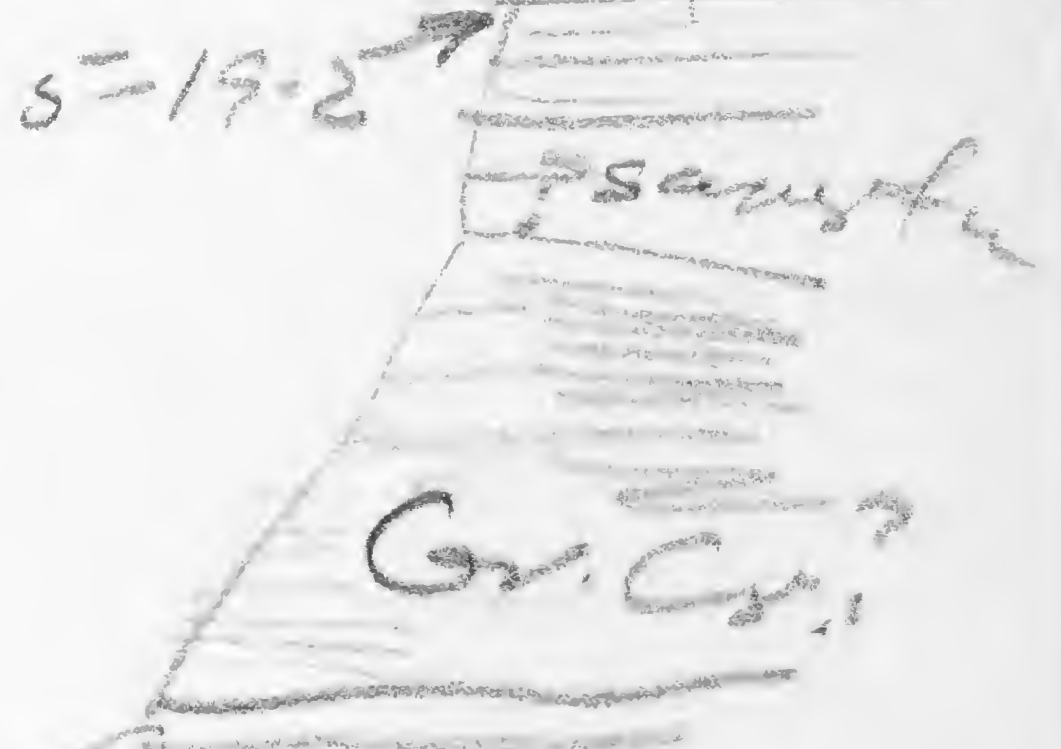
19541

sieve material labelled 5/19/4/5
is barren - disc., but may
be wrong date or coll. #

May 19, 1952 sel. p. 3
 Bellevue Hollow, Nebo
 S. of Clarksville Mo.

1 mile from H. way
 just across bridge

5-19-2 brown argill.?
 mudstone? at
 base of La. Ls.



Green clay
 clay
 magnokete?

Go up rd to rt hand fork.
 continue on Left to fork where
 Outcrops are rt.

May 20, 1952.

p. 1

Hamburg - Claring
Methodist Church

5-20-1 basal ~~claring~~ ~~Hamburg~~ shale
member of the Hamburg white
1'± above Ls. Ls.

5-20-2 3'± above 5-20-1
Diss. No. 1

5-20-3 Cedar Valley Ls. (Dev.) 1'± below
Ls. Ls.

5-20-4 Go N. of Town 0.4 mi. at steps to
river Hamburg white 4 or 5'± above
base, "shale beneath, rests on Ls. Ls."

Diss.
No. 1

May 20, 1952

p. 2

Dogtown Landing

Go S. along Water to
where rocks are flat

5-20-5 Shale parting in St. Louis ls.
 24606-PC. & ls below parting has coral
 6' above River level (High water)
 about 30' S. of fold



May 21, 1952

p. 1

1 mile N of Hardin Ill. Turn L up
 Poorhouse Hollow 0.7 mi. To waterfall

Waterfall (L.S.)
 (Hamburg shale)

Covered interval up stream

5-21-1

Hamburg sh.?, outcrop opposite
 first (and only) house on rd.

same as 5-21-2

way

Go up main road 1.25 mi. to
 Frenchman Hollow. go up rd. 0.35 mi.
 Sh. in place, Oolite above shale
 in boulders that may be float.
 Oolite up to pencil across Cr.

5-21-2

Shale, presumably Hamburg,
 below oolite.



Get oolite from Williams & Duncan coll.

NAME

May 22, 1952

DATE

p1

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

Guide b. loc. 10

11. Tel. (eleven) Poles yte,
Signal .16402/164113 Poles after
Mile Post 164This does not look
like either Bushb.
or Gr. Cr.

Chautauque

disc.
no ostr.

S-22-1

Top 3" of bushb. →

S-22-2

lower 2 1/2" 3"

BUSHMURGE 3"

S-22-3

Brownish weathering
1 1/2" 2-2 1/2"2 1/2" 3 1/2"
Gr. Cr. sh.

S-22-4a Sh. at base 1 1/2' below top

S-22-5 Top of border stuff

No ostr.

✓ S-22-4 →

Hood 1 1/2' 4'
Brown ss 3' 1/2' X
Cal away ↓Hoxby more
silty & laminated

NAME

May 22, 1954

DATE

p. 2

U. S. GOVERNMENT PRINTING OFFICE 16-87601-1

Quarry Guide Stop. 11

5/22/54
No 058Shale Parting in Charles
15-20' above floor
from which Brown got chert.5-22-54
Disc.
No fossilsBurlington block, often
out of place with
massive fossils.

Photo Black & white 1-22

39' above floor 1 ft
of quarry.Failed to Find Moneys
Locality 200 yds from
Early station.

NAME

May 23, 1952

DATE

p. 1

U. S. GOVERNMENT PRINTING OFFICE 16-87601-1

Chowcan Springs.

Bridge across Cr. Little Chocoma
Cr. as shown 25. very
few fossils

5/23/1

No fossils

May 23, 1952

Tann 65. Just below footings
N side of bridge has
a block 9" below foundation
20' upstream from bridge.

5/23/2

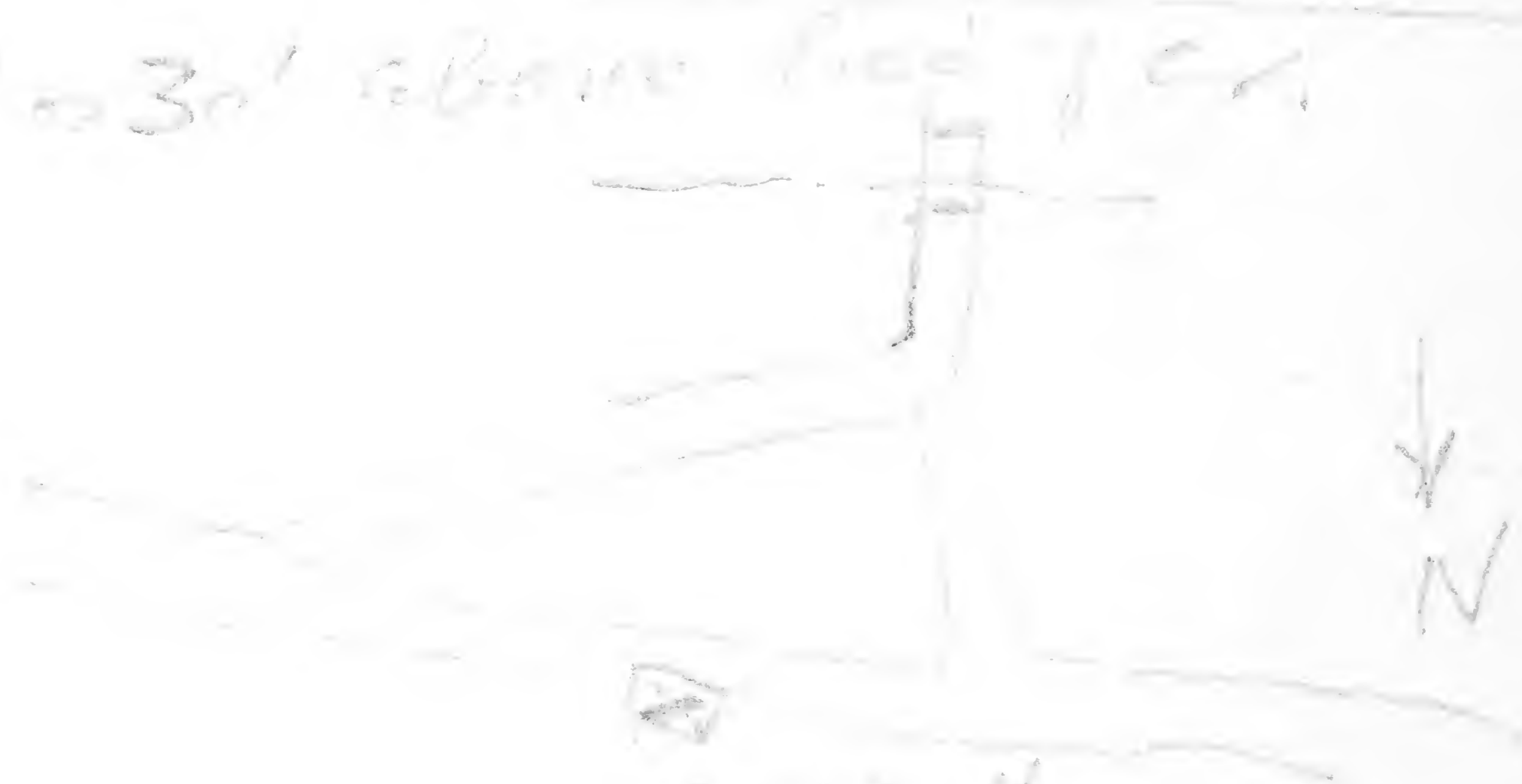
Sandy layer (dolomite) 6'-7'
directly above 5-23-1
(May 20/ section)

5/23/3

15'-5' upstream from bridge
less than 1' strat. above
5/23/1

5-23-4

23' to 30' above bed 1 Cr.

No
Ostr.

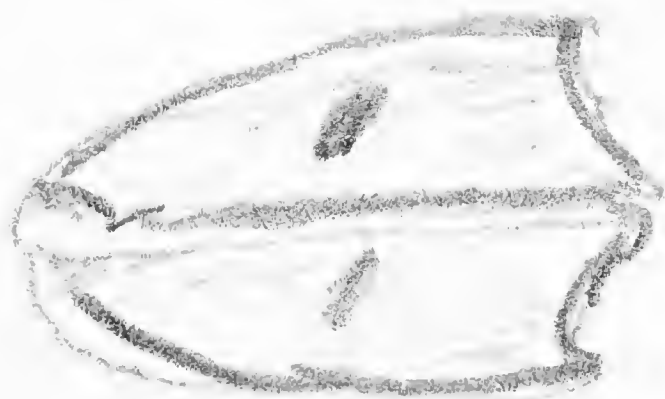
Burlington center on rd.

May 22, 1952

Hypotetragnon imposita Morley 1933
 placed in Cytherellidae,
 probably Klocenellid

Plagionephrodes 05-1000-5 V Macell
spec. bone

Morley's Thesis Pl. I has 43 figs
 pp. 15-16 Kirkbyina quadrispinosa
 + Pl I figs 13, 14
 Good Coryellina.



13



14

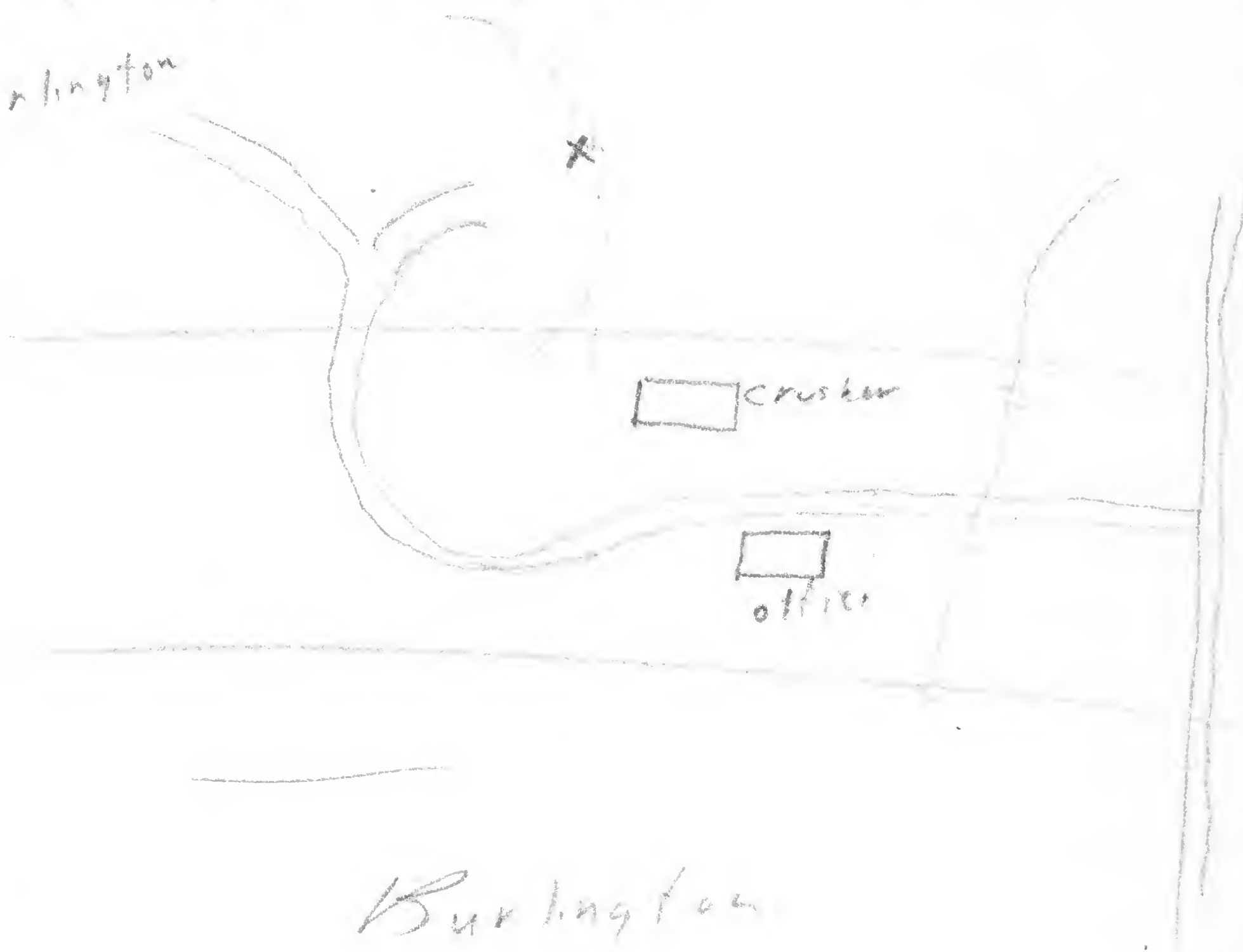
NAME

DATE

U. S. GOVERNMENT PRINTING OFFICE 16-87601-1

Turn N at Kingston City on 54
 cross Duckvass Cr. $\frac{1}{2}$ mile
 rd to Quarry. NW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec 35
 T49N R9W.

Burlington



X

Burlington

Chouteau



ss. Bushberg - 4"-10"

7-10

Greenish Shale - Snyder Creek

20'

Dev Lms. Callaway (Idiastromes)

NAME

May 23, 1952

DATE

p. 2

U. S. GOVERNMENT PRINTING OFFICE

16-37601-1

Harris Prairie on
Rd. E. from Hudson
Valley along rd. mi.
from Harris Prairie

cut shows chert and
yellow sh. and clay mixed
with ss. & ls. cobbles
may be Snyder Cr. sh.

5-23-5 sample of
Sh.?

5-23-6 Snyder Cr. sh.
(macro fossils) on
smooth slope higher
and 30' ± upstream
5-23-5.

5-23-8 Bushy sand
go up hill along stream
pile to point out under
Burlington. White sand
mixed with yellow clay
Watch for continuation

NAME

May 23, 1952

DATE

p. 3

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

Gravel stops 14

Snider Cr. sh. at roadside

Muddy gravel with ls.

nodules. 5/23/7

12853

Gravel & Nodules
Watch the bags - it
was for contamination
with overlying pebbles.

5/23/8

Callaway, ls. below 5/23/7

5/23/9

See p. 2

Bashberg mixed with
day watch for contamination,
over 5/23/7

May 27, 1952

p. 1

Castlewood Section at
milepost - 2220 (over)

- 5-27-1 6" of brown sand, prob. base
of Fern Glast or Top of Bushberg.
The same layer extends to
rt. over outcrop as a green
reentrant. more than 1' thick
- 5-27-2 3" sandy layer 2' above base
of 5-27-1 (Fern Glast)
- No
Ost.
Dis. case
The base of the Bushberg
is roughly 8' below 5-27-1
- 5-27-3 Bushberg 3' above base
No Ost.
- 5-27-4 2" Bushberg just above
6" phosphatic zone which is
the base of Bushb.
No Ost.
- 5-27-5 Basal 3" of Bushberg, phosphatic
- 5-27-6 Top 2" of Gr. Cr. just below
Bushb.

River

m. Lepus

0
2220

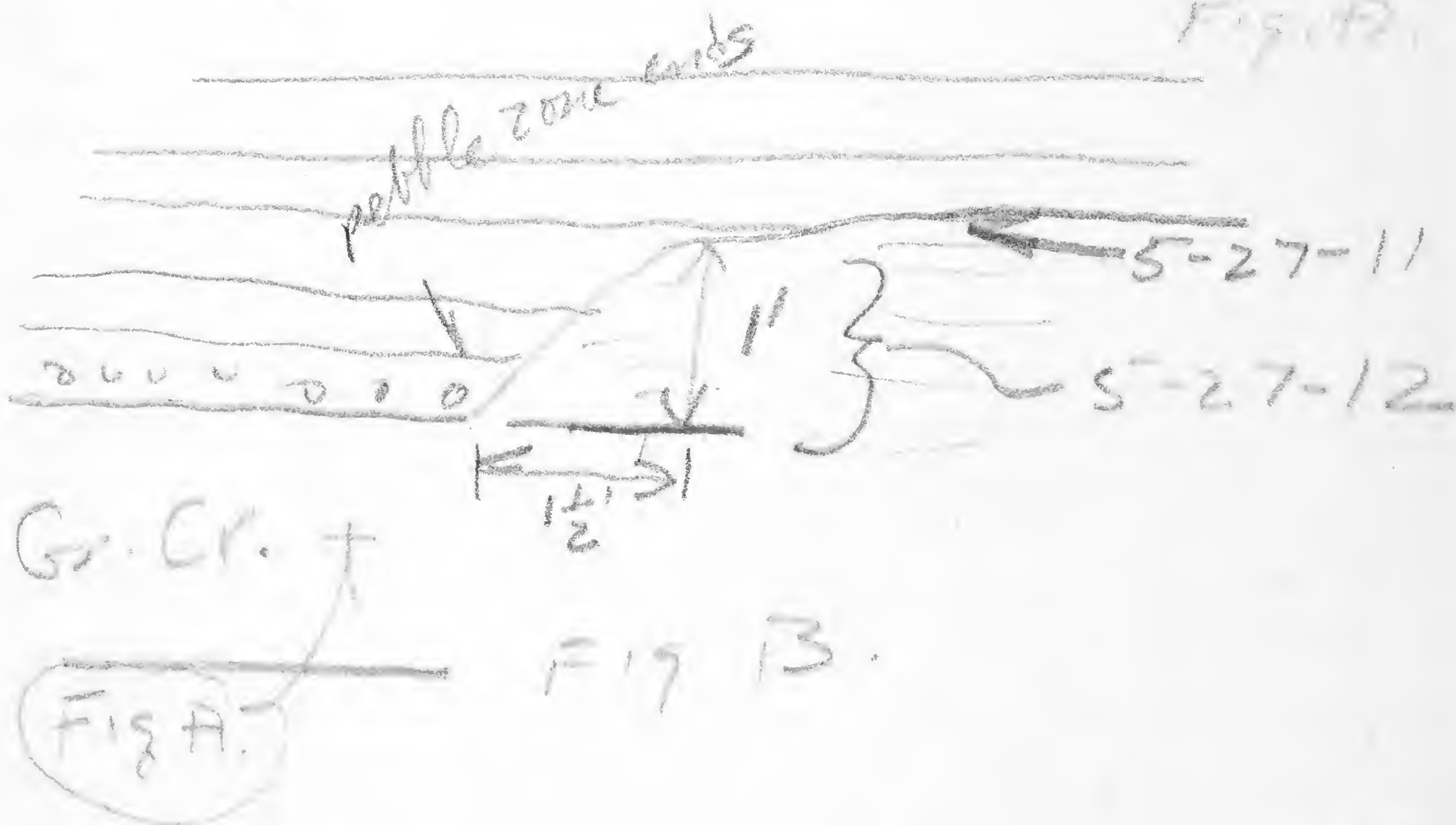
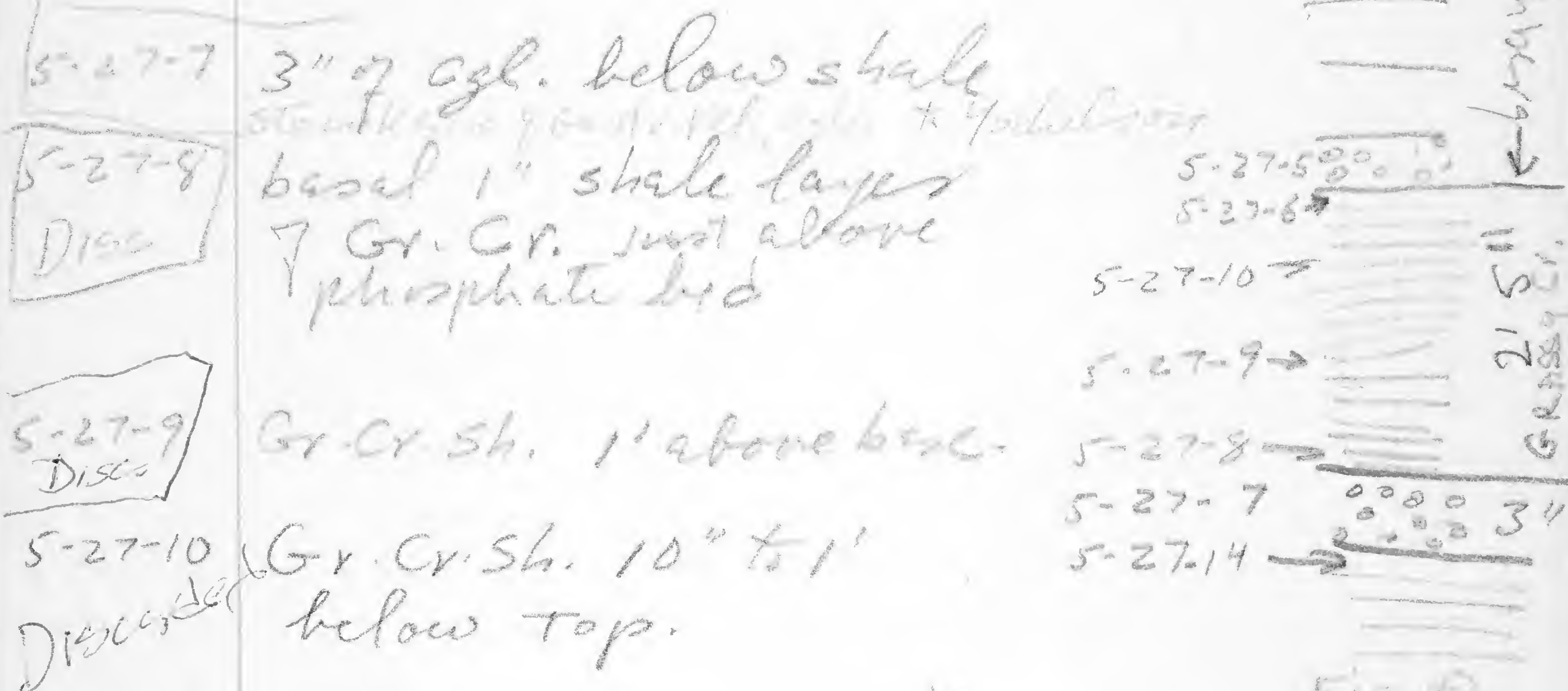


0
calves

slope of outcrop



May 27, 1952 p. 2
 Castlewood Station.



5-27-11 Top 3" of sh. sample discarded
 poor ostr
 5-27-12 Channel sample of entire pt. 2 sh.
 5-27-13 Magnolites, Channel sample 2 1/2' to 4'
 below base of Gr. Cr.
 5-27-14 top 4" of Magnolites No Ostr.

May 27, 1952

p. 3

5/27/52
 poor ostr.
 snail
 wormholes

Castlewood

Magnolia slope 10'± below
 top. Taken 2 Top material
 to catch the ostracodes.

 Hall's May 28

May 29, 1952
Goetz Quarry

p. 1

from Weller 1906 pp. 435-436

- | | | | |
|----|-------------------------|------|--------------|
| 11 | Burlington | 18' | |
| 10 | Xlle Green Gray ls | 7' | 3 chert beds |
| 9 | Red ls Fern Glen | 8'6" | |
| 8 | Shale & red calc. | 6' | |
| 7 | Xlle yellow to gray ls. | 4' | |
| 6 | Bushong | 14' | |
| 5 | Sandy sh. | 4" | look for |
| 4 | Glen Pk | 1'3" | |
| 3 | Maguoke ls | 4' | |
| 2 | dark ls | 1'6" | |
| 1 | Kimmswick | 55' | |

May 29, 1952

Gaults Quarry

5-29-1

1" to 2" shaley clay, green
and brown between Bushb.
and Glen Pk. May
contain spalling of Gl. P
and overlying Bushb.
Weller bit (5)

5-29-2

a pocket 4" to left
5-29-1, apparently from
same level, but probably
not contaminated

May 29, 1952

p-3

Wellers bed 3

- 5/29/9 Gless PK Ls. upper portion just below 51.9/2 secondary?
- 5/29/8 Top 3" just below G.P. secondary?
- 5/29/7 Lower 9" of shales, gr. to yellow mottled clay
- 5/29/6 1' channel dense yellow brown siltstone black carbonaceous specks
- 5/29/5 9" same as below channel
- 5/29/4 3" sandy clay with Ls. at base rare corr. snails
- 5/29/3 6" mottled red and yellow clay with nodules of ss.

1" dense yellow siltstone
1' 0" yellow siltstone
9" same as below
3" yellow clay
6" sandy clay

Ls.

5-29-10 basal 1" of Gless park. Chiseled from overhanging ledge.

12854

May 29, 1952

p. 4

road from Goetz Quarry
to above RR cut.

5-29-11 red shale in
upper part of Forinkeekuk
Butler ^{formation} above
nonfossil. massive
Tan LS with
Chert bands
* 1" in thickness

No
OSW.



The massive material has calcite
nodules.

May 29, 1952

M.S.

loc.
40 x has
↓

3 mi ± E of Pacific
Gateway 66 to 51 km Fox Creek
Rd. turn N. NW 0.7 miles
outcrop of ls on rt. side of road

Curtis C Fleming "Ost. Platin" type locality
within 6 to 8' of above top of Joachim fm

5-29-12 9'± shale in Platin
according to Pappas near Top of Platin
contains ostracods

5-29-13 bottom 2" of 5-29-12
rare ostr. conodonts.

5-29-14 top 1"-1 1/2" of 5-29-12

5-29-15 bed below sh.

5-29-16

To H. W.

3"-5" bottom pt of
overlying ls.
which weathers like
Kimmerwick

5-29-15 →

4' thick ls
gray
#5-29-16
sh. 9"±

Massive ls

layers 6"-8"
with sh. partings
drab colored

B+W photo roll 2#s

Pappas at outcrop

marker below shale

May 30, 1952

P. 1

Clark Locality for sites. Plateau

US 30 E of Hound Springs

5-30-1 To High Ridge or $1\frac{1}{4}$ mile W of High Ridge - Hill on which home "Shangri-la" is located
 platy ls. 1'± weathers tan above massive brownish weathered ls. 2'±. platy ls has sparse weathered fossils to many fossils

5-30-2 Very fossiliferous above platy ls like ①
 5-30-3 now poss. 2 clunches inks. ② No obs
 To G.A. Cooper Disc

5-30-3

Greenish sh. below ls. 1" - 2" at ② No obs
Disc

5-30-4

1" - 2" ls. above sh.

5-30-5

lower 2" of 1'6" shale above 5-30-4

5-30-6

 $\frac{1}{4}$ " ls, 1" sh, 0 and 1" rotten? ls? below

ls. and top of 1'6" shale layer of 5-30-5,
 do ls. separate

5-30-7

ls. above 5-30-6 basal pt
 may be with 5-30-6

5-30-8

6" layer 2' above 5-30-7, ls. poss.

5-30-9

massive poss. ls. 8'± above

~~5-30-8~~ 5-30-8, top of hill

ls. 2'-3' thick sample from

Top 6"± Opposite pole A.

of Schedule.

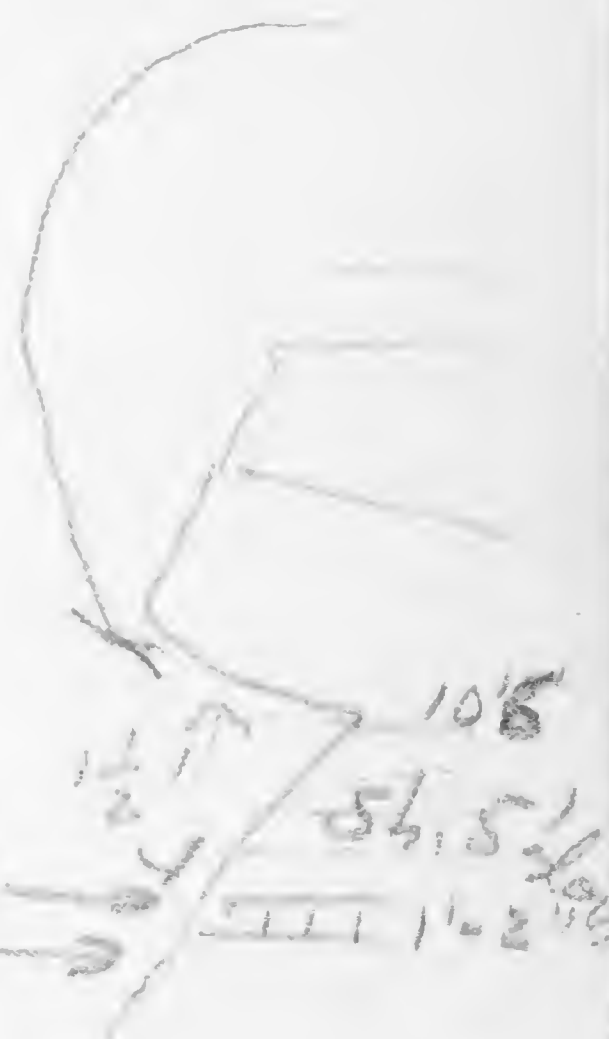
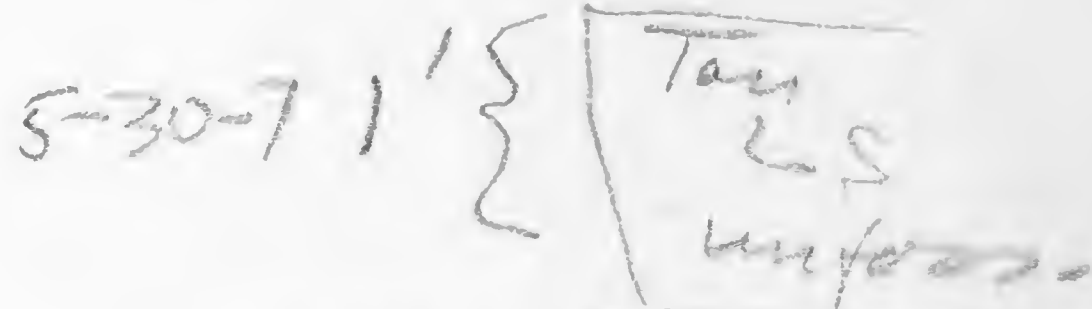
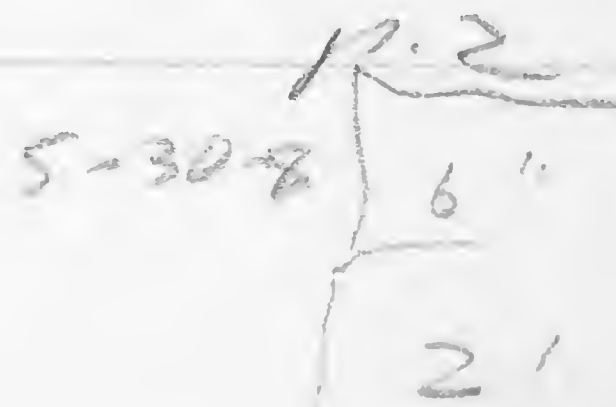
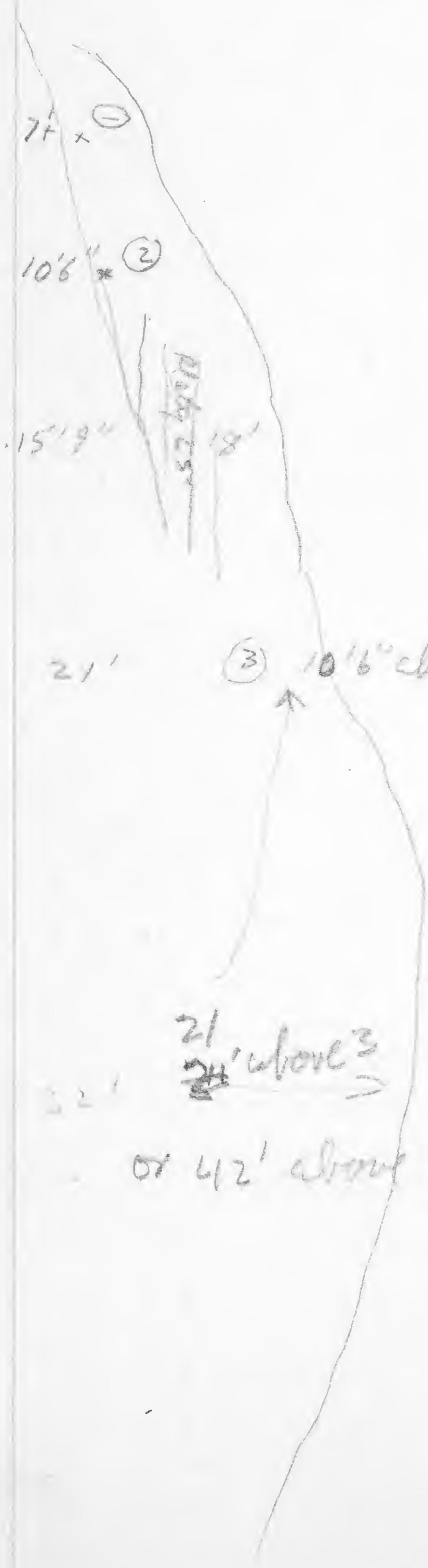
Hill below "Shangri-la" home, 1 mile west

Barnes Cafe $\frac{1}{4}$ mi W of High Ridge

Shangri-la owned by Brown of St. Louis.

May 30, 1952

datum
N. side Hwy 50
opposite pole area
near end of guard fence



5-30-4
5-30-3

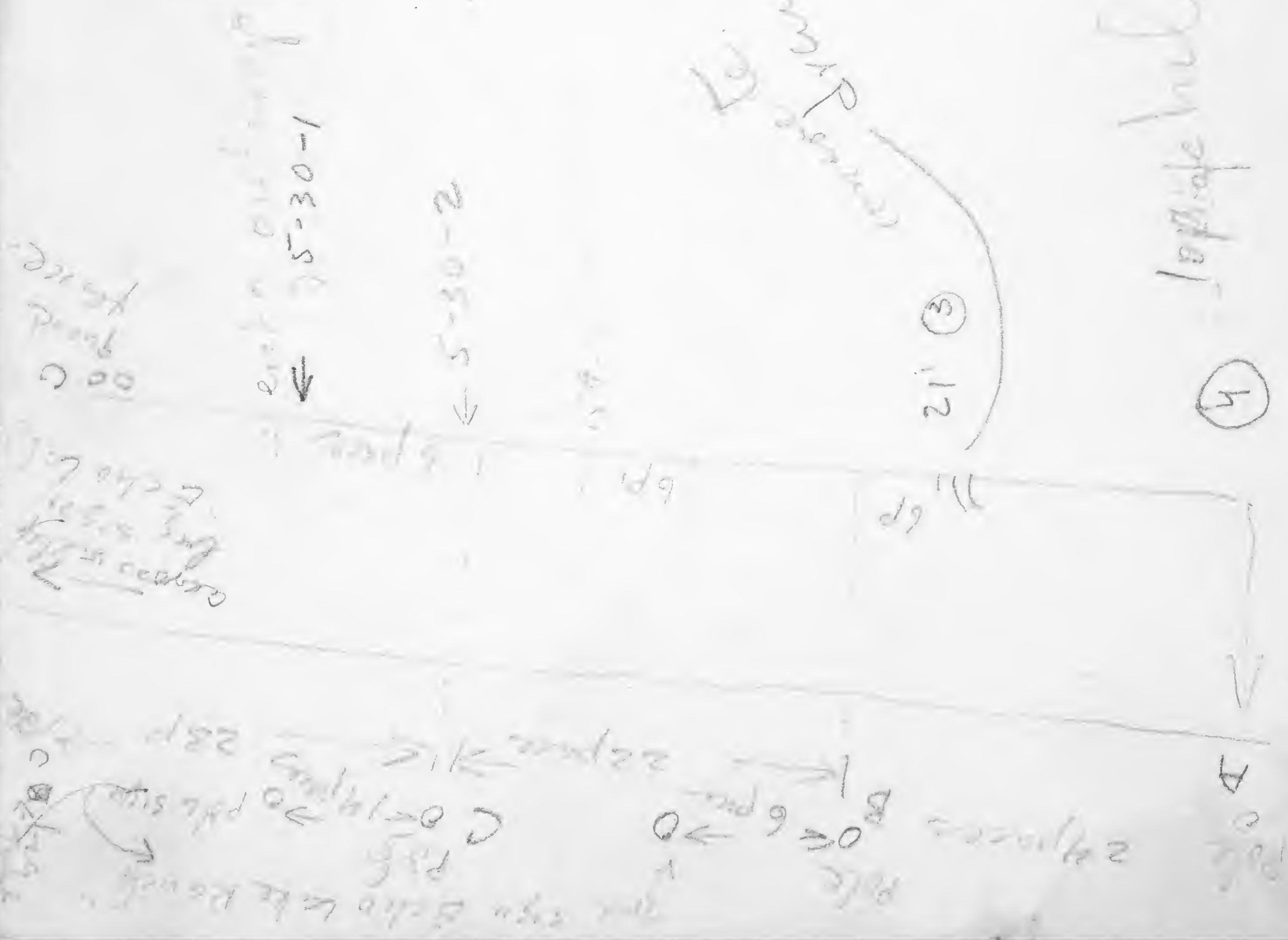
21' above 3' 5-30-9
or 412' above datum

May 30, 1952
 Station on Hwy 30
 see pp 1, 2 7 May 30, 1952

Slab Rocks
 in Secora, near
 the last 100 yds

Gravel from a

lignite bed 5-30-9



S	T	W	Th	F	S
25	26	27	28	29	30
	Brill.	Castle Ward	Rolla	Glass Plate	Fernble
Reports 1 ✓	Keyes Pt. Cr. ✓	Pt. Cr. 3 ✓	SHIP ✓ Go La. Buff. Cr. ✓	Buff. Cr. SV ✓ Louisia	Gassy Type Turn BV
Gassy Cr. MEGISTON Refining ✓	Salvage ✓	Hammill Ship Top ✓	Salvage ✓	Ward ✓	Bellows ✓
15	16	17	18	19	20
Lovers Leap Ship	Monroe City	Save to rd. ✓	Soap Cr. ✓	Quarry ✓	Soap Cr.

11-15 World
 9-15 Hammill Gen. Del.
 18-20 Hammill
 21-23 Vibans

22 23 24 25 26 27 28
 Augustin Montano State Hosp, Montano, Ill.
 SESO 11T 12SR 7E 1/2
 7 Enchorn Hardin Co
 Review It
 6/4/after ship
 wt 1900
 R 1750

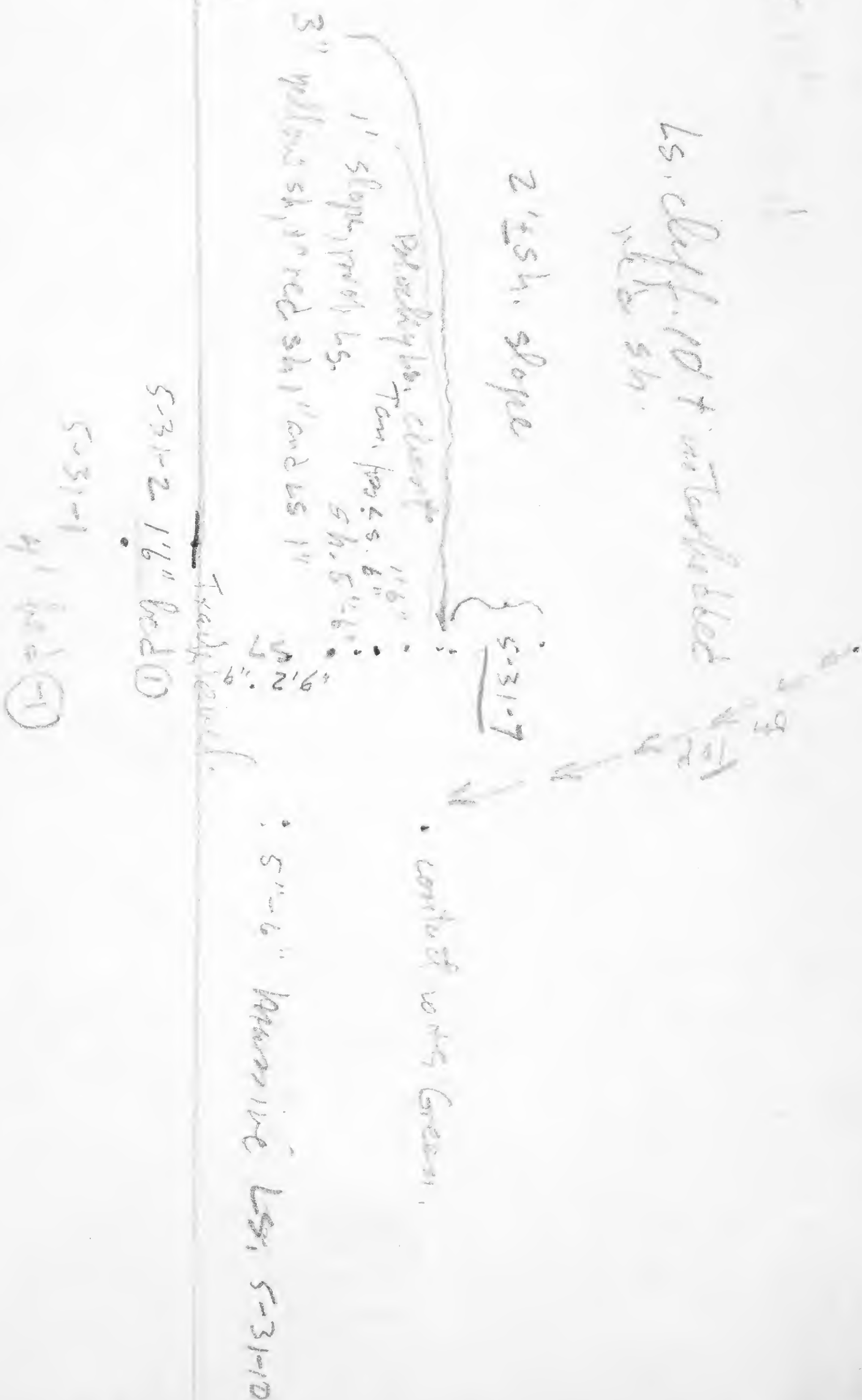
May 31, 1952

Type Fern Glen

Scale Vert 15' = 1' 15' = 10' = 2 paces

Sta. A. Sta. B. Sta. C.

residual



May 31, 1952

p. 2

Type Fern Glen

Bed ① 1'6" massive ls. with layers
of chert nodules 3"x6" to 2"x10" and
smaller.

Bed ① 4' massive ls.

5-31-1 upper 1'6" of bed ① Station A

5-31-2 Bed 1 chips Station A

5-31-3 6" above bed 1 chips Station A

5-31-4 3"± of shale 3' above bed ①

19579? red brown with streaks of green
green about 1/2" at top Sta. B.

5-31-5 6" ls. green spirifer, basal 2"± Sta. B.

5-31-6 2' above 5-31-4 3" sh. and ls. bottom 1"
ostr. yellow, next inch ± red, rest inch ls. Sta. B.

5-31-7 upper 6" of red shale Sta. B.

The contact of green and red is
a zone chert nodules, nodules
in red zone also. 2' above contact
of Sta. C. is a 6" bed of chert and
cherty beds continue up.5-31-8 green sh. above contact Sta. C.
1' to 1'6" below massive chert.5-31-9 Red sh. and ls. within 1' below
ostr. contact with Gr. Sta. C.5-31-10 massive ls. 3' below contact with Gr. Sta. C.
DISC

5-31-11 Sh above 5-31-10 Sta. C. Lost.

Kodak roll 2 film 9-13 Fern Glen Type, 13 bed ①

B & W film "Warren" Middle Fern - red chert

Cott. W. 341-379
Cross Rd. Inn

all Br. T

69.3

69.23

69.15

71.45

Since
Lima Br.
is closed

Sign

68.8

68.51-

Main

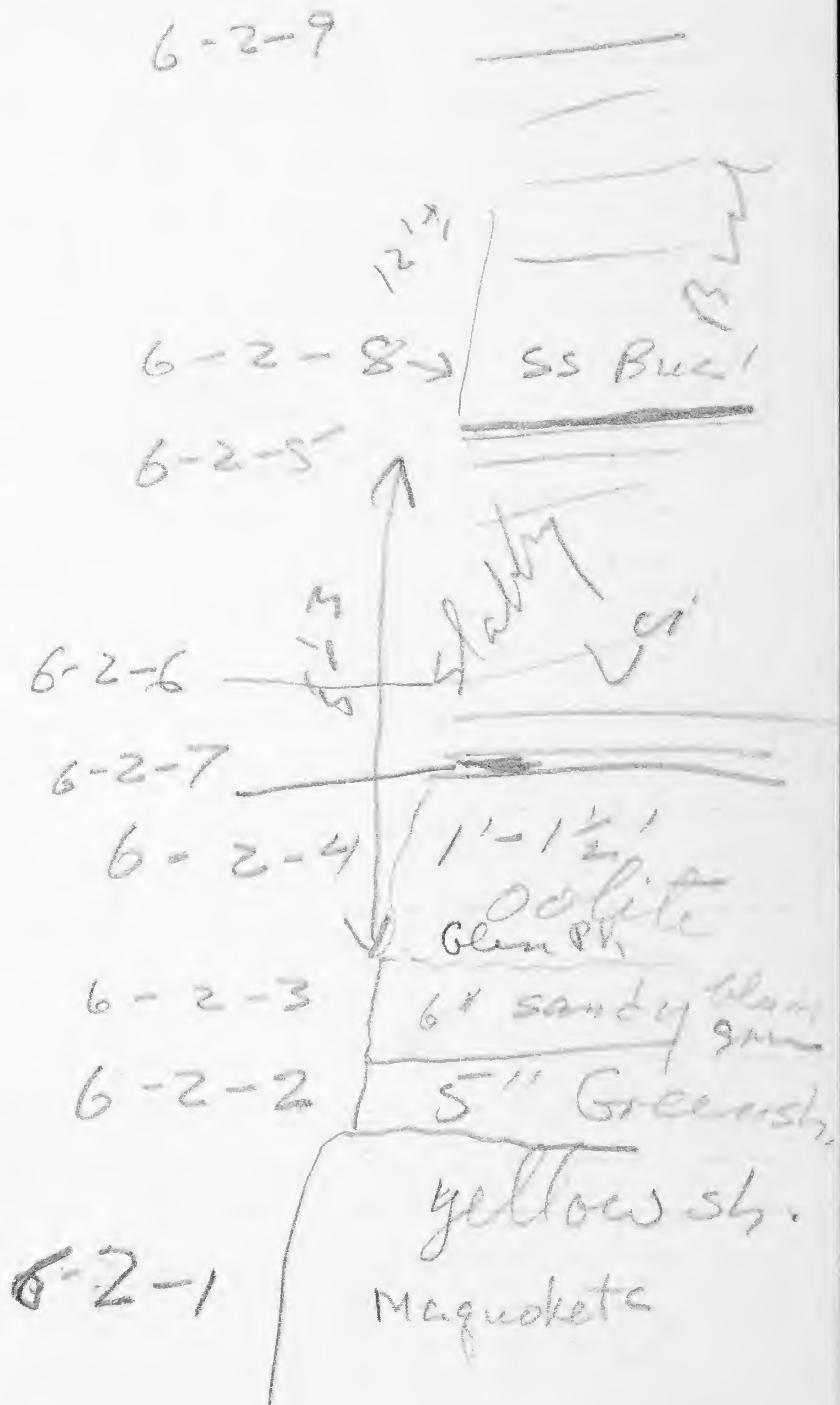
Private

from Glen

May 31, 1952 p. 3
Log from Fern Glass.

- 68.51 Private rd. junction w. the main
Turn rt. 5 yellow boxes across rd.
Grady } first 2
R W Hopkins } yellow boxes
- 68.8 Bridge and rd. to 6 coming
sign castlewood points left.
Lancaster Beach.
- 69.15 Bridge Turn left
- 69.23 Castlewood Acres. x rd.
turn rt.
- 69.3 Stop at Bill Breit for repair
rd.
- 69.4 Mobilgas st. on rt.
- 69.8 Log cabin on rt.
- 71.45 x rd.
- 72.2 main Hwy Turn Rt
- 72.25 City limits Baldwin
- 72.35 Bridge
- 73.55 Crestwood manor gate on L. side
- 73.8 end Manchester begin Baldwin.

June 2, 1952
 Keefer Cr. Section



June 2, 1952

- 6-2-1 yellow shale. wavy beds
- 6-2-2 Green sh. 6" just below
SS?
- 6-2-3 6" green and blue mottled
undulating phos. sh. ss?
- 6-2-4 Glen PK oolite channel
of lower foot.
- 6-2-5 Glen PK 5' above base shaly
ls. Top Glen PK
shaly ls 1' ± above oolite
shale between
Wash both separately
- 6-2-7 sh. parting above Glen PK.
massive bed and below 6-2-8
- 6-2-8 Base of Bushberg
- 6-2-9 Bushb. ss. 12' ± above base

6-2-5
No Oolite
disc.

June 2, 1952

3

Fern Glen RR cut

6-2-10

Grab sample of Talus
of Fern Glen

Go past RR Track

6-2-11

blue 1' above red

either Fern Glen or
trans. with Burlington

Castlewood

6-2-12

Pyritized zone 1' ±
below Top S. of milepost
22 20

6-2-13

Fern Glen near Castlewood stops
lower green sh. above LS

6-2-14

Red Fern Glen above green

of 6-2-13

6-2-15

LS. 2 1/2' below 6-2-13

June 2, 1952 p. 4
6-2-16 Burlington rd. from Castleton
reading 54.65
54.7 Lincoln Beach Road
Out crop E of road
56.6 Hwy 50.

1900

Front

1750

Wen

THERE • IS • NO • SUBSTITUTE • FOR • QUALITY

glencoe #

Holcrest

Platt^{cat} in

slabs
silicified
fossils

Eureka #

178 - 192 E. NINTH STREET ST. PAUL, MINNESOTA

LITHOGRAPHERS

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H. M. SMYTH
PRINTING CO.

GA RFL 5891

NAME

June 3, 1952

DATE

p. 1

U. S. GOVERNMENT PRINTING OFFICE 16-87601-1

Paint Cr. Loc. Illinois with
Prof. Weaver

07.4

Millstadt Illinois Main Rd.

08.4

Turn S. (rt) on S. Jefferson

Take rt of Y fork

Winding rd.

9.6

side rd. left. Go straight

on winding hill

10.9

~~side rd. left on T rd.~~

1/4 road turn left

11.2

Joag rt

11.4

side rd. left. Go straight

12.2

Joag left

12.3

Joag right on T road

13.3

iron bridge.

13.35

side road rt. go straight

13.85

Turn left on Vogel to Schall

cont mine

14.0

School house

14.55

bridge

cross bridge on left

Drop to creek

NAME

June 3, 1952

DATE

U. S. GOVERNMENT PRINTING OFFICE

16-37601-1

Paint Creek, 2

6-3-1
Ostr.

Shale just above creek level

6-3-2
Ostr.

Ls. 5"-6" w. sh. shale between

6-3-3

Sh. above 6-3-2 4"± has blastoids

6-3-4

Ls. 6"± above 6-3-3 looks like lens

6-3-5

Shale 6'± above base below Ls. nodules

6-3-6

Grab sample same level to 2' lower than

6-3-5 →

6-3-5

↑ 6'48'
sh. here
to top

6-3-4

Ls. 6"±

6-3-3

Sh. 4"

Ostr.

— 6-3-2

Ls. } 5"-6"

Ostr.

6-3-1

Sh. 3"
Ls.

NAME

June 4, 1952

DATE

p. 1

U. S. GOVERNMENT PRINTING OFFICE

16-37601-1

Buffalo Creek, 2 miles S. of
Louisiana, Mo.

Walked road skirting the south
side of Buffalo Cr. The road
has a gate across it on W. side
of Hway. Walk to end of hill
on side of which Louisiana Ls.
crops out. Ledges of massive
Ls(?) crop out on rd. then an
old rd takes off to left of
wagon rd. This rd ends in
water course. Walk up ravine
to plateau above Louisiana Ls.
No outcrops. Retrace steps to
westernmost outcrop of Louisiana
Ls. This is near top of La. Ls.
One bag and one slab of fossiliferous
brown Ls(?) about 1 1/2' to 2' thick
with small pebbles. About 2' below
this zone is a calcite bearing
zone.

6/4/1

CSTR.

6/4/2

6/4/3

CSTR.
6/4/4

Walk back (E) to next outcrop
of La Ls with slide below it uncovering
underlying sh. 17' or 870' up
2 bags of clay partings above
basal 1' of Louisiana Ls.
1" x 2" of clay just below La. Ls.
Black sh. (Sav. toxi?) just below
clay of 6/4/3

at 1000 ft.

NAME

June 4, 1952

DATE

p. 2

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

By use of pinch bar I removed approximately 3' x 2' of lowermost bed of Ls & ls. and scraped the clay partings above this bed and above 6"± bed overlying basal bed. This clay should have a minimum of contamination and is coll. 6/4/2.

Removal of lowest bed Ls & ls revealed clay below Ls & ls which was collected as 6/4/3. This may be slightly contaminated from above.

Scraping away overlying clay I collected top 2"-3" of black shale as 6/4/4. Although care was taken, it may be slightly contaminated with basal clay of 6/4/3.

Will return to-morrow for more samples.

June 5, 1952

p. 1

Buffalo Cr. S of Louisiana

870' \pm WD of gate at Hwy 79
Slide exposes basal Louisiana LS
and underlying shales. Same stop as
6/4/52

6/5/1

Beard 2"-3" of yellowish clay
shale

6/5/2

Scrape off yellowish clay
to clear area of black shale
and sample black shale,
top 3" \pm

6/5/3

Partings above basal bed 1'-1 1/2'
of Louisiana LS.

6/5/4

black shale (Gr. Cr.?) 6' below
LA LS.

6/5/5

Bl. sh. 3 1/2' \pm below LA LS.
Broke shovel. —

6/5/6

No Ostr.

Basal 1 1/2' of LA LS. macrofossils,
use for dating

June 5, 1952

E. scarp of Hill on S. side of
Buffalo Ct.Upper foot of Saver, top hard,
with conchoidal fracture,
more like mudstone.

6-5-7

Upper 1' of Saverston

6-5-8

Channel sample of 1' 6"
of greenish and bluish
soft clay shale
Non fossiliferous, prob
Saverston

6/5/9

Top 4' of black
fossiliferous shale.

6/5/10

basal 2" of Gr. Cr.

6/5/11

SS or Ls, 1"-2" (clay)
just below Gr. Cr.

6/5/12

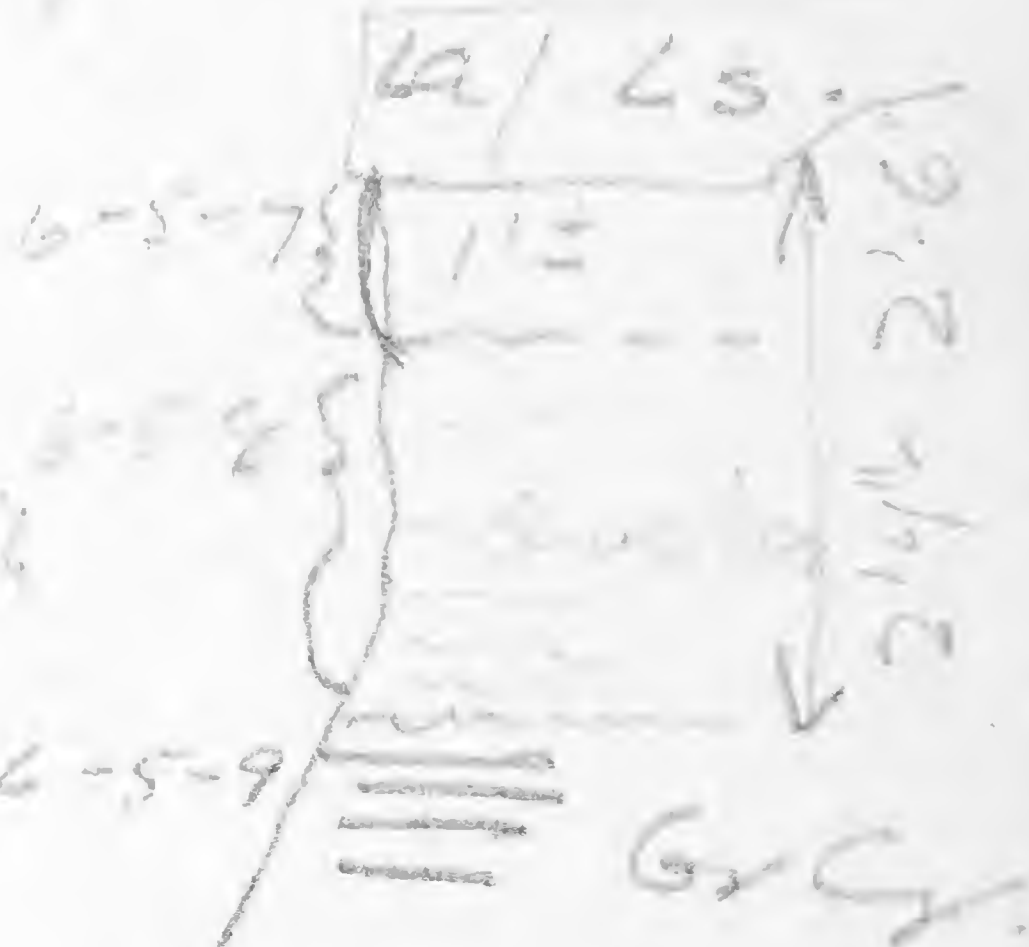
{ clay below ss (or Ls)

~~6/5/13~~

{ bluish clay 2" below ss.

This grades into brown
SS which is top of massive SS.This gradational zone is
a mixture of clay and sand
about 1 1/2' thick

6/5/13

Top of SS + 1 1/2' of gradational
clay & sand Bowling Green ss.

NAME

June 5, 1952

DATE

P. 3

U. S. GOVERNMENT PRINTING OFFICE

16-37601-1

Go to New London

0.45

turn L Shell road to W on Co. Rd

1.25

E. imp. road outcrop at it.

Watch for Stop 32

N side of rd. 1.56 miles from New Haven at L. turn at Shell station

6/5/14

basal 2" of sh.

Brown sandy

In st. bed 100' to 150'

Basal ls is platy here

having 6" beds

6/5/15

parting in lower pt of ls

6/5/16

3" of shale yellowish, sandy
bedded 6/5/14 thin sh. ls

6/5/17

6" +
Hard black sh., non fossiliferous
when fresh, conchoidal fracture
col. top 2"-3"Gold vein and phosphate zone

6/5/18

Shale 5' below 6/5/17

6/5/19

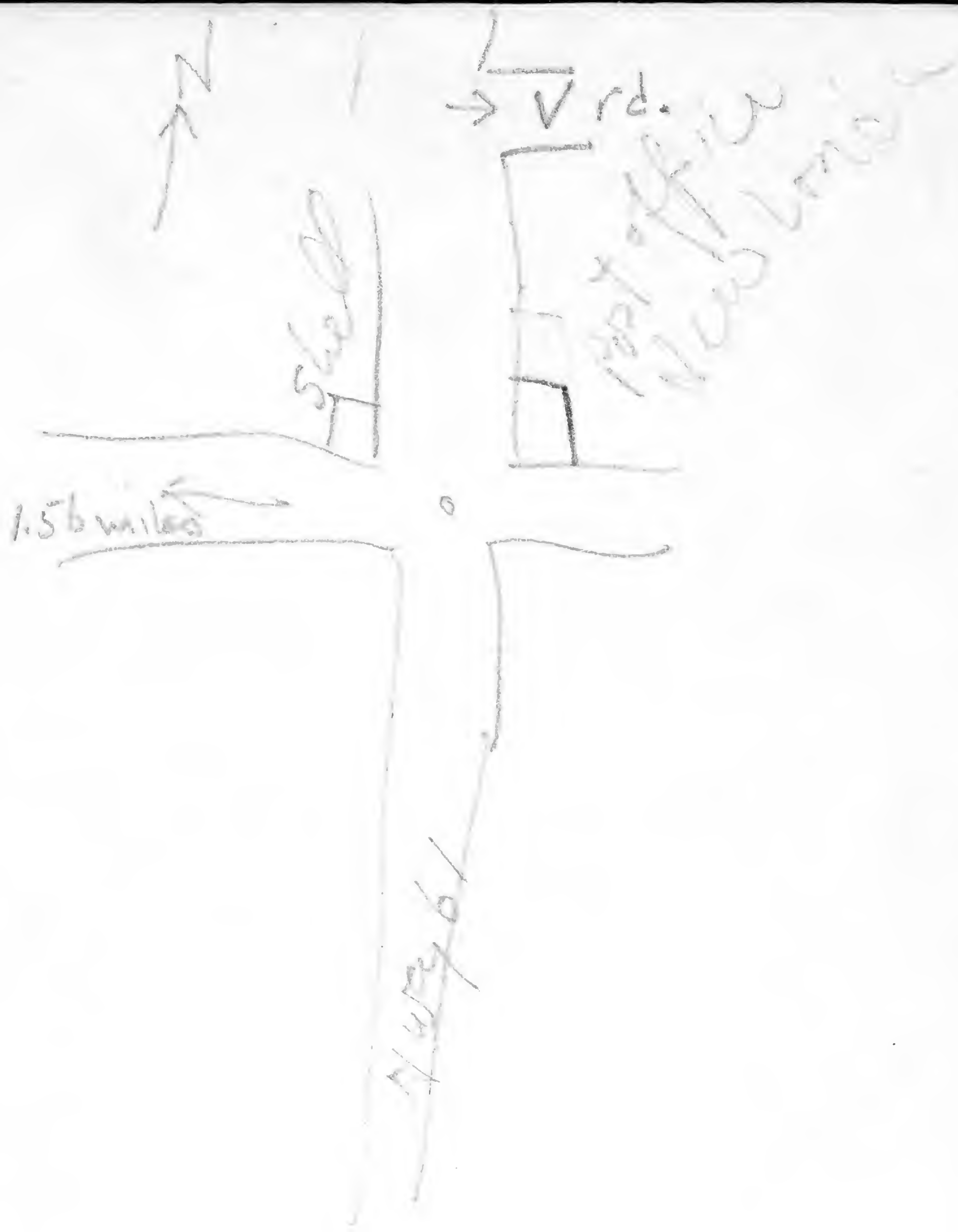
Basal 6" of bl. sh. perhaps

6/5/20

Top 3" of Green clay

6/5/21

Gr. Cr. Sh. 2' above Green contact
(over)



June 5, 1952 p. 4

Junction 61 Hwy & B county
rd. S E corner Quarry.

6/5/22 Fossils in block, D
To you ~~either Flinton or Kimmswick~~
Pot 4/7/54 at floor 7 Quarry Fossils etc.
6/8/23 ~~clay~~ in Kimmswick
7"± red with yellow seam
1"± in middle. Is this
berestonite? —
Disc
Nothing

NAME

DATE

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

June 6, 1952

P. 1

Grassy Cr. Lr.

32.88

Turn left from church which
is left from T. 5. road house
week

33.3

34.2

Log rt.

34.9

Bridge - cross it

35.12

Ford on Gr. keep rt.

Go to house park car
walk across field to Cr.
and out crop

Walk up slope downstream
from outcrop to top of
cut. Ls Ls float present
in top of outcrop
yellow and green micaceous
clay. Distance below Ls Ls
not determined but not
very great
yellow and green clay
highest available

6/6/1
Conodonts

6/6/2
Conodonts?

6/6/3
teeth
no ostr

6/6/4

Tan shaly clay, micaceous
5' ± below 6/6/1
Black hard shale 3'-4' below
6/6/2 Gr. Cr?

Dark sandy sh. at top of cliff
upstream end of exposure

June 6 p. 2 Gressy Cr.

6-6-5

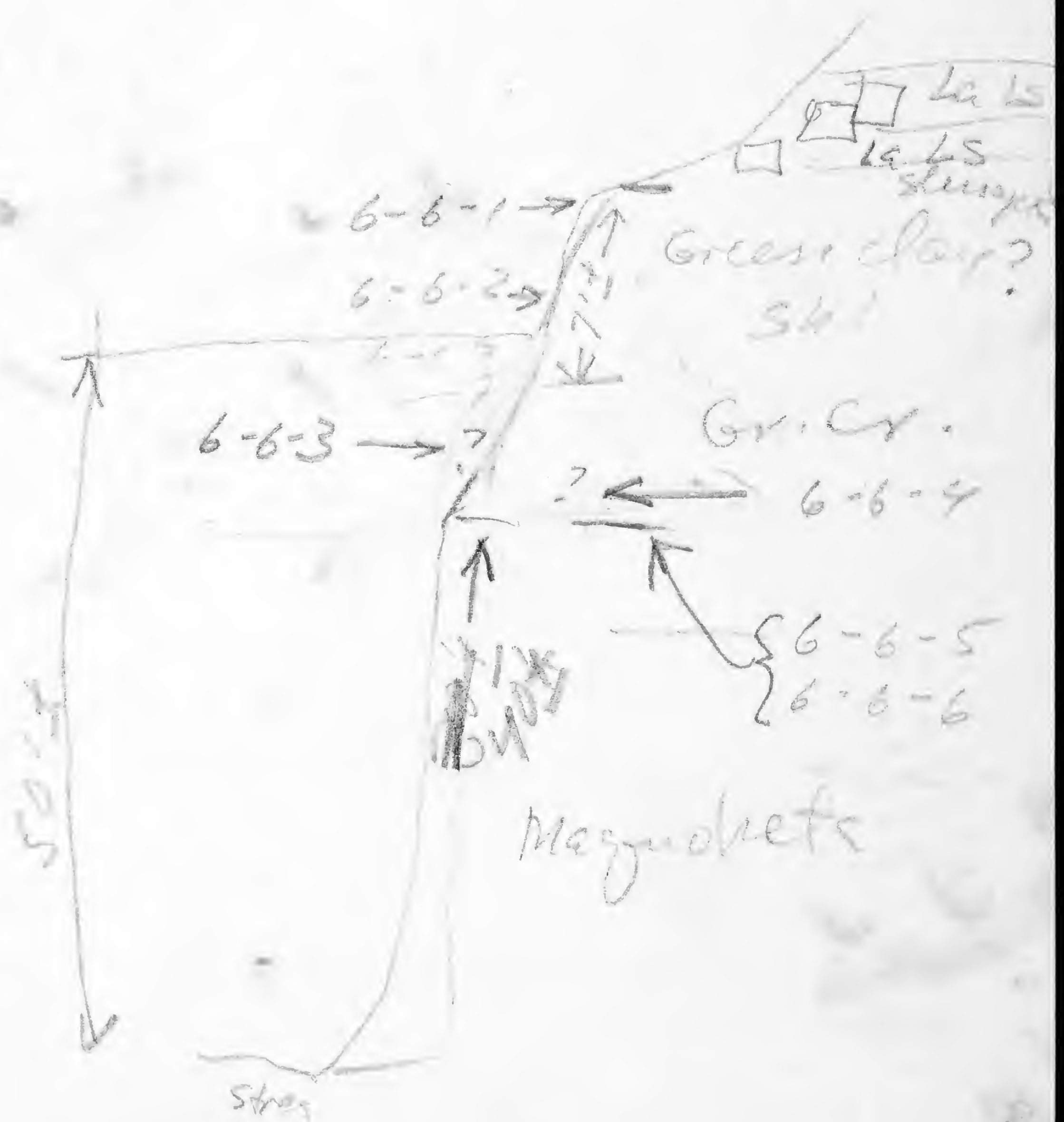
Bl. sh. Gr. Cr. at upstream
side of exp. this is underlain
by tan sh.

6/6/6

no Ost.

Underlying lighter colored
sh. (Magnetite?)

Dropped Tape, 50' out and snapped out of frame



NAME

DATE

U. S. GOVERNMENT PRINTING OFFICE

16-37601-1

June 6, 1952

P. 3

Town ^{Br} Locality see
 May 13 p. 2 for directions
 see USGS Oil Paper 203, p. 16, 1943
 30' - 40' Louisiana basal
 bed 1' ± thick
 Two to 3" brown grading
 into dark massive, hard
 fossil. mudstone (Saverton)

6/6/7
 Ost +
 Corridots

Dark massive foss. Sav. Toy
 upper 3"

LS

6/6/8

Brown material underlying 6-8" 2" 3"
 6/6/7 6-6-7 ?

6/6/9
 19540

La. LS. pay. Toys 1' - 2'
 above base

Walked along H.R.N. to bridge
 Louisiana LS. about 40' or 50' thick
 at any place there is a slight
 syncline in La. LS. Further
 north there is an exposure of
 the base with underlying sh.
 and further along the Noix
 and overlying Eagle River is
 exposed. Walked up steps to
 bridge. According to survey
 taken the center of the span
 is 72' above normal water level.

June 7, 1952

p. 1

Pinnacle Hill
Met. S. K. Tutthill
Troy J. Leswell

Tutthill is doing the Negro &
for his masters. State interests

Leswell did Bowling Green
for Ph.D. State will publish.

6-7-1
12832

posting in La LS. at cave.

2 Kodak Pinnacle Hill Tutthill
BW. same view 38' at 65° N

The boys recorded 38' at 65° N
of La LS.

Go above to Hannibal sh.

6-7-2

Hannibal sh. 10'± above Top
of La LS.

6-7-3

sh. in Hannibal ^{14'} below
top.

6-7-4

"Lower Brown" of Burlington
has fossils 10' below Top of Cliff.
within 5' of base

Too climbed to top of
hill and where Burlington

NAME

DATE

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

- June 7, 1952
 Took boys to Larches. pic
 Went back to put crop of
 11 made high picture site
 Channel sample 9' of sh. and
 sandy sh below Grd Cr.
 See back of May 12 pic
 Basal 6" of Grassy Cr.
 Channel 2' 18" Grassy Cr.
 Basal 3" of Saverton, just
 above Gr. Cr.
 Parting in La L. Sp.
 N. of cave at picture site
 Top Magnolite to Shran
 3350 46½'

June 7, 1952 p 3

Clinton Springs, Louisiana

6-7-10

Saverton 1' below La. L.S.
C.L. Cooper reports ostracods.

Saverton is 1' 7" underlain
by bl. sh. Gassy Cr.

6-7-11

Top 3" of Gassy Cr.

6-7-12

2 bags of perforators

in La L.S. bag 2 has
harder material.

6-7-13

2 pieces of Noix oolite

NAME

DATE

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

June 8, 1952

P.L.

Gyssog Cr. Loc.
Upstream on top,
upstream edge.

6/8/1

6"± Tan ss. sh. above
Magenoketa

6/8/2

6" phosphatic zone with
teeth? just above 6/8/1
and directly beneath Gr. Cr. Sh.

6/8/3

Gyssog Cr. at base
just above 6/8/2

6/8/4

Top 2'-3" of Magenoketa

6/8/5

Magenoketa Quarry 3 NE of Bowling Green
rotten zone in Bowling
Green about middle of
Bowling Green.

June 9, 1952

RR Tracks at Lowland, S. of Bridge
 Kodak 2 exp. of Lower Ls. site & coll.
 6/9/1 picture of Lower Gressy Cr. Tuff
 on base of Cr. Cr.

6/9/1

12835

6/9/2

picked.

~~12836~~

partings in Ls Ls.

basal 2" just below Ls Ls

Kodak 3 coll 6/9/2.

Burlington, Iowa

6/9/3

Burlington Ls. in Riverside park
 Rd. beside arched point just
 S. of Mark Twain statue

NAME

DATE

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

June 10, 1952

10.1

Walter, fair near Hwy 61 and
SW corner of T. near Lumber Co.The well is 10' deep by
a 2-3' sample of fossiliferous
ls. - Br.

6/10/1

Clay shale (10' sample)
massive mudstone 2'±
into Tan siltstone 2'±
becomes bluish (wet) and
becomes bedded to water 2'±
6'±

Burlington

6-10-2

2'

6/10/3

6'±

6/10/1

a

1"± of green and red clay
just below Burlington ls.
This is Topy Hannibal

6/10/2

2" to 3" of weathered Hannibal
just below 6/10/1 this grades
into massive mudstone

6/10/3

2' channel sample of bluish
slt before massive bed

6/10/4

Basal 1"-3" of Burlington ls

6/10/5

Burlington 3' above base

June 10, 1952

p. 2

6/10/6

Clay, probably water-borne
100'± inside of portal

6/10/7

Dist.
+16
No 0.47Shale parting at 4th
light switch "Brick wall"
at top of wall inside N. of

6/10/8

Dico.
HookTwin cave
dolomitized ls. in cave.
Drove on rd AA 5.1 from T. Exposure
of basal ls. ls and underlying fm.

6/10/9

12833 A

6/10/10

Shale parting in ls. ls

Sh. 1"-2" just below ls. ls.

The above is in hill
IV. 7 rd. to Camp Oro-T 1101

Ann. J. Sci. 2418 no 3

p 194, 1950

NAME

DATE

U. S. GOVERNMENT PRINTING OFFICE 16-87301-1

June 11, 1952

P. 1

02.5

07.45

Seehorn Hollow.

Quarry KGS stop

turn rt. after crossing bridge
before bridge arrow points left
to Seehorn

Claus Kroencke place
on left. Creek & rt. empties
in front of farm house
McCraney flat, walked up
it. To Bluffington in place.
Under young trees, not exposed,
except for possibly some
McCraney in side of creek.
No collections

Part 1/2 way between bridge
and farm house. The creek
crossed by old bridge - has
upstream to new bridge some
exposure of

1. Bluffington
2. Native mudstone
3. McCraney
13' + 7' McCraney exp.

McCraney has banded look like
varved zones to 1" thick

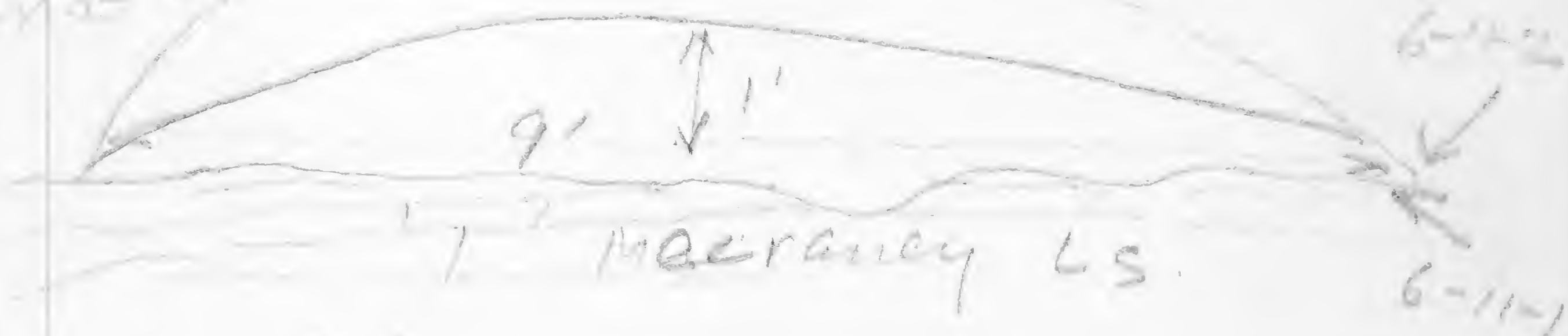
June 11, 1952

p. 2

See also hollow
Creek crossed by Bridge locality.

Overlying the McCraney is
a yellow sandy mudstone.
At one place there is a
mottled brown and yellow
clay between this ss. and
the McCraney apparently
filling a channel in the
McCraney. I dug back the
concordal fracturing ss. at
the upstream end and found
the clay behind the ss. could
push a pinch bar for more
than 1' behind ss. into clay.
This is either weathered
ss. or a offset fm. between
ss. and ls. The clay has the same
feel as weathered McCraney 6-11-3
check if it is dolomitic

Top of ss. downstream



6-11-1
No ostr.

Clay behind ss.

6-11-2

6-11-3

6-11-4

ss. above and in front of clay
Weathered McCraney 1'± from Top
3' channel 3'± from top of McCraney

99

NAME

DATE

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

June 11, 1952
 Warsaw, Ill. Type-
 Loc. By Stone Bridge
 Go upstream and left
 to waterfall. A massive
 ls ledge 2'-3' holds up
 creek.

6/11/6 ls directly above sh.
 & some shale same as 6/11/5-6-146
 6/11/5 Sh. 2'± just below ls
 6/11/7 Sh. 7'± below ledge
 breaks in conoidal
 6/11/8 Sh. 5' below 6/11/7 down to
 a good bed 2½'-3' below coll
 6/11/9 Good bed.
 Walk around bend good bed 2½'-3'
 2½' 2½' thick
 6/11/10 2' below 1st good bed. 2'±
 second good bed 3' below
 1st g.b.
 6/11/11 Sh. 4'± 2nd good bed which
 is 4'± above creek water
 a 3rd good bed forms a bench.
 2' above water
 6/11/12 Top 7' 3rd good bed 2± below
 6/11/6

see p 4

June 11, 1952

p. 4

About 30' upstream from bridge
a ls. ledge picks up

3'-4' below good bed 3. 7/6/11/12

6/11/13

shale just above ls. 3'-4'

below 6/11/12

also
No. 4

Color 4^{#5} Type Warsaw
white layer at bottom is
good bed 3

Film 1 B&W Type Warsaw

6/11/14

ls. just below 6/11/13
near Bridge

June 12, 1952

Ralls Co. Mo

1.75 miles from Saverston Sch. H.
and 0.3 mile upstream from white
house which is after Lowe mailbox
or 1.45 mi from Sch. House
color 6, 7, 8 Saverston Type, 9 coll. places
black #12

6/12/1

Sh. parting in ls. 1 1/2' above
base 12852

6/12/2

Saverston, Channel Top 1'

6/12/3

1' channel sample 2' from top

6/12/4

1' channel 1' below 6/12/3

6/12/5

bottom 3" of Saverston?

6/12/6

Top 3" of more chert blacker
in this Cr. Cr.

6/12/7

1' channel 6' below 6/12/6

6/12/8

5' below 6/12/7 at
Cr. level

NAME

DATE

U. S. GOVERNMENT PRINTING OFFICE 16-27601-1

June 12, 1952

p. 2

6-12-1



6-12-2 1'5"

2'1"

6-12-3 1'5"

1'1"

6-12-4 1'1"

6-12-5 3'3"

Change to H. Station
6-12-6 → Cor. Co.?

South

June 12 K-3

6/12/9

Lower Leap. opposite R.R. Yx
 Basal Haskinell (yellow)
 and top La Ls? rec.

6/12/10

Haskinell just above
 6/12/9

6/12/11

Float weathered Haskinell
 at 6/12/10 Burlington?

NAME

June 13, 1952

DATE

p. 1

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

Conoco
station
storage
tanks

Keokuk, 5th St. X N
Side 7 Soap Co. old
Quarry behind Service
Station. Rubble factory
Junkyard. Scrap. Prob. same
as mentioned in MS. Wash. D.C.

6/13/9	LS just below 6/13/8	LS. with sh. parting 12'-16'±
6/13/8	Shaley zone 2'3" above	6/13/9
6/13/7	Top of 8" LS & sh. 1'± above	8" lime sh. layer
6/13/6	1" sh. just above	6/13/5
6/13/5	2"± lime layer	6/13/4
6/13/4	Top 1"± of sh.	6/13/3
6/13/3	Lower 3'± of sh.	6/13/2
6/13/2	Shaley bed 14" above	6/13/1
6/13/1	Top of LS ledge	6/13/22
		water
		2'± LS 6/13/1

Color
1

9-14 or 10-15 Keokuk Quarry
15 or 16 closeup of coll. 6/13/3 To 9

June 13, 1952

N. side of Des Moines Riv.
 Iowa Dep. on Hwy
 at "city limits" and So. 7th St.
 at entrance to Bridge -

6/13/10 Sh. with geodes overlying Ls.
 has geodes. Prob. Warsaw.

6/13/11 Sh. above Ls. no geodes
 observed, green streaks
 in sh.

6/13/11

6/13/10



NAME

June 13, 1952

DATE

p. 3

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

Lover's Leap Rd to Post
 house on rd
 6/13/16 weathered ls.
 red brown.
 6/13/12 sh. below Burlington → red. Buck
 Top Hannibal
 6/13/13 Hannibal verm. ss. → sh. 1'3"
 6/13/14 Green sh. 8" → verm. ss. 1'5"
 6/13/15 Tan verm. ss. → green sh. 8"
 Tan ss.
 covered & vertical

Form 9-076

NAME

June 14, 1952

DATE

p. 1.

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

Kinderhook Quarry

see May 15, 1952 p. 1

The McCroney is not like
La Gr. in that there are
no clay partings. Little
caves or holes filled with
brown clay, may be
brought in

6/14/1

brown clay from holes
in McCroney entire surface

6/14/2

Brown dirt from 2 little
larger caves in McCroney

No ostr.
Rec. Snails

8' x 4' x 2' ±

6/14/3

ss. brown base of McCroney

6/14/4

Engl. Riv. near base
in Cr. above Spring

6/14/5

Maple Mill in Cr. above
Spring

Hannibal Locality from Hannibal
Williams Oct 12, 1950

From Hannibal Hwy 36 to Monroe
City then take Hwy 2 to section
line 3 sec. 5. To White Franklin
School. Turn left ~~where Hwy~~
1 mile on 2. Turn North.
Go W on small rd 0.4 mi.
cross roads. Turn L to Newmarket
(3 or 4 ~~small~~ old houses.)

Turn S go .3 to 1st bridge
over 1st stream (Boike's
Branch) walk 1400' upstream
to Hannibal Shale

Go downstream to La Ls.
Top of cliff Jimmy didn't know.

Form 9-076

C. W. Cooke

NAME I. G. Sohn

DATE

March 16, 1954

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

3-16-1

Central Ave. and Addison Rd. NW of x.
Tel pole 89378, E. of Esso station
Patapsco, in cut for Bldg.

Oak Grove section

Central Ave. to Largo, turn rt. on 202 2.7 mi.
cross bridge. This is Schmidt loc. B, p. 396.

x 3-16-2
x 3-16-3

x 3-16-5 x 3-16-4

3-16-2

Below indurated bed, prob. Schmidt sample B-6
Piscataway member of Aquia fm.

3-16-3

1/2" 6" below 3-16-2

3-16-4

Green foss. sand just below calc. ledge 55'
from tree at W. end of cut

3-16-5

Sand at road level W end of cut opposite Pole
across road.

110

NAME

DATE 3/16/54 p.2

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

3-16-6

40 nothing

1½ mi. W of Leland on Largo-Leland rd. which is road to left from Oak Grove. Road cut opposite Perry Hill Farm gate. Green sand Cooke says Aquia



3-16-7

Continue on rd. past Pope Cr. RR. Branch, cross Collington Br. Cut in road on curve Cooke says prob Aquia, may be Nanjemoy

3-16-8

— Continue to next curve and rd. cut. Leland Rd. ¾ mile from Crane Hway anjemoy on map.

NAME

DATE 3/16/54, p.3

U. S. GOVERNMENT PRINTING OFFICE 16-37801-1

301 N. of Central Ave. $1\frac{1}{2}$ mile to Queen Ann Rd. on rt.
(E), $\frac{1}{4}$ mile to rd cut

3-16-9 Miocene just below diatomite, approx. 10'
disc. above pink Marlboro Clay.

3-16-10 Pink Marlboro Clay
disc.

3-16-11 Tan clay just above pink -Marlboro?

Central Ave and 301 just behind diner

3-16-12 Marlboro Clay at road level
disc.

3-16-13 Clay 6' approx. above 3-16-12 Miocene?
disc.

112

Form 9—076

NAME

DATE 3/16/54, p. 4

U. S. GOVERNMENT PRINTING OFFICE 16—37601-1

#01

301 South of Marlboro, first road cut
S. of RR. crossing

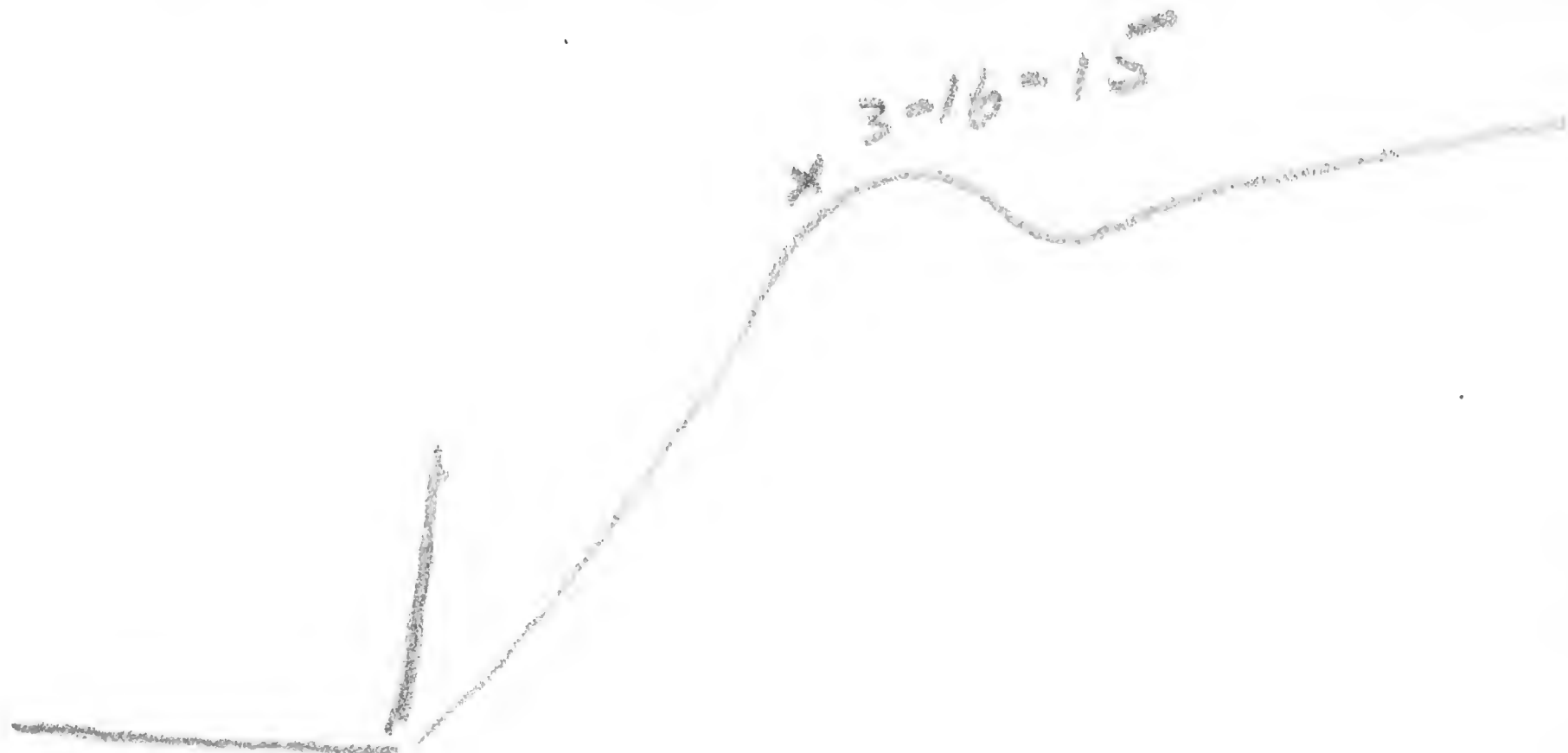
3/16/14
Disc

Marlboro? clay E side of rd. N. end

3/16/15

Top of cut near 2nd pole

Nanjemoy, dark fossiliferous sand.



NAME

DATE 3/16/54, p.5

U. S. GOVERNMENT PRINTING OFFICE 16—27601-1

Upper Marlboro Quadrangle
Road opposite 3682 Crane Hway. Creek E. of Rd.

Keep rt on Marlboro Pike E. from D.C. at
Marlboro triangle

Creek shows contact of Aquia and Marlboro Clay

3/16/16
Disc.

Marlboro Clay 1' above contact

3/16/17

Aquia just below contact

Marlboro and 202. Go through Marlboro take
first rd left just before RR. tracks to
car lot. Schmidt loc. C woods W of rd.

(Schmidt says E. of rd, but E. has no ledge)

3/16/18

Aquia greensand below second indurated ledge

3/16/19

Rd. above car lot, same loc. as 10/22/5
1951 but road has been cut and slope moved
Aquia near top.

NAME

DATE 3/16/54, p.6

U. S. GOVERNMENT PRINTING OFFICE 16-37601-1

USGS loc. 17101, 17102, Prince Georges Co.

Report p.32, paragr.2

Flora Park Rd., $2\frac{1}{2}$ mil E of Piscataway

Gully near house of W.L. Stanton, over 2 fences
to spur with exposure. Fossiliferous not seen
because of fallen trees.

3/16/20

Nanjemoy

115

Form 9—076

NAME

DATE 3/16/54, p. 7

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3/16/21

Indian Head Rd. $1\frac{1}{2}$ mi. S. of Silesia, rd.
cut 0.4 mi. S. of fork
Green and mottled clay above Marlboro, Miocene
or Nanjemoy

3/16/22

Marlboro Clay

Friendly -Schmidt loc.

23
3/16/24

Aquia

3/16/25

Cretaceous

24

Indian Head Rd.

3-16-25

Woods

3-16-24

3-16-23

3/16/26

Friendly rd. near Indian Head rd.
Aquia